

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

GERMANY-ENGLAND-AMERICA.

[The London Statist.]

The two highly civilized countries which admittedly have made the greatest progress in every form of industry during the second half of the nineteenth century are the United States and Germany. And the United States is not merely wedded to protectionism, but it carries protection in many directions to the extent of prohibition. Yet it has become within the past few years a greater producer of iron and steel than any other country, and it is advancing with giant strides in many other manufactures. Whether the progress would not have been more rapid and more assured if free trade had been adopted is a question which may be disputed to any length without arriving at any definite conclusion. All that is certain is that the growth in wealth, in population, in industry and trade is unparalleled. And it seems a reasonable inference—though, of course, it is only an inference—that the country is about to enter upon a far fiercer competition with Europe generally than has hitherto been experienced. Protection, then, has not prevented the United States from attaining a height of prosperity such as has rarely been seen in the world. At one time Germany appeared inclined to follow the lead of this country and adopt free trade, or, at all events, to establish exceedingly low import duties. But under the leadership of Prince Bismarck she took a different course, and passed at once to protectionism. Her progress has been second only to that of the United States. It is quite true that she had much headway to make up, and that the mere rate of progress is not to be given too much importance. But that Germany is a keen competitor with this country in many fields; that German merchants are taking away trade from British merchants in several countries; that German enterprise, German skill and German manufacturing industry rank very high, is beyond dispute. Here, again, it may be argued, if anybody thinks it worth while to dispute about what cannot be proved, that the progress would have been still more rapid and still more assured with free trade. However that may be, the fact remains that protection has not prevented Germany, any more than the United States, from attaining a very high degree of prosperity. On the other hand, the United Kingdom is not as pre-eminent either in manufacturing or in trade as she formerly was. Make every allowance that anybody pleases for the backward state of other countries half a century ago, and for the great forwardness of our own, and for the necessary consequence that, when once other countries begin to move, their movement must inevitably have been quicker than ours, yet the fact remains that free-trade England is not today, either in the opinion of thoughtful Englishmen or of thoughtful foreigners, as assured of the economic leadership of the world as she was half a century ago, while in the very same opinion the competition of the prohibitionist United States and protectionist Germany is growing more formidable every day.

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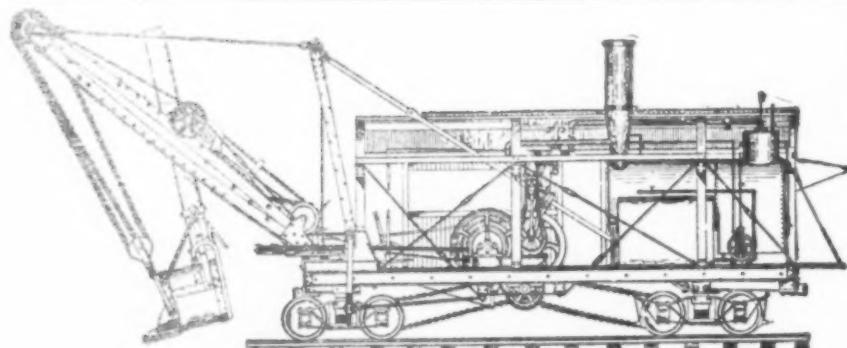
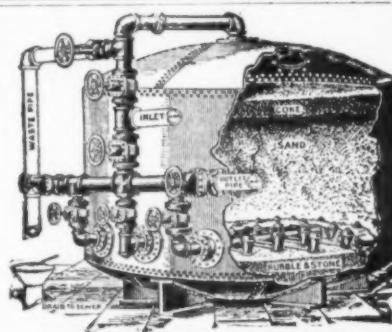
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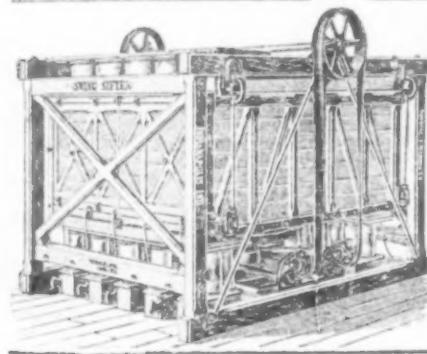
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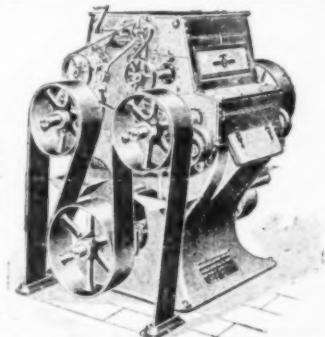
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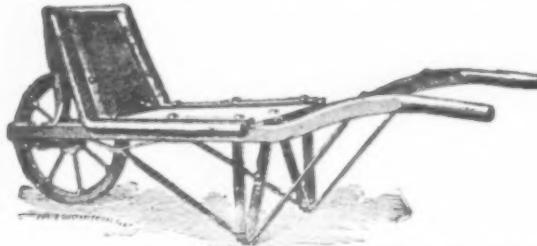
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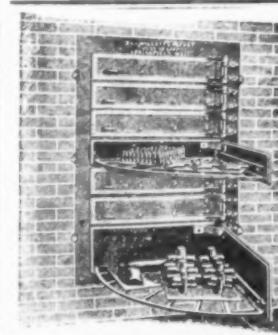
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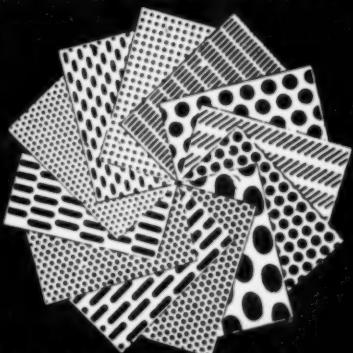
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Carbondale Mch. Co., Carbondale, Pa.

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Naib, B. & Co., New York, N. Y.

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Baily, Chas. H., & Co., Chicago, Ill.

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Davis Coal & Coke Co., Philadelphia, Pa.

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Electric Trucks.

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Elevators.

Albro-Clem Elevator Co., Philadelphia, Pa.
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Bartlett, Hayward & Co., Baltimore, Md.
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Spedel, J. G., Reading, Pa.
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Westbrooks, J. B., Fdry. & Mch. Co., Danville, Va.

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Caldwell, H. W., & Son Co., Chicago, Ill.

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Ludlow-Saylor Wire Co., The, St. Louis, Mo.

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Engines.

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Otto Gas Engine Works, Philadelphia, Pa.
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Westinghouse Machine Co., Pittsburgh, Pa.

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Phoenix Iron Works Co., Meadville, Pa.

Scaife, Wm. B., & Sons, Pittsburgh, Pa.

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Warren Webster Co., Camden, N. J.

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Baader, Adamson & Co., Philadelphia, Pa.

Fencing. (Iron and Wire.)

Balderton, H., & Son, Baltimore, Md.

Bolles Iron & Wire Works, J. E., Detroit, Mich.

Burger Iron & Wire Works, Akron, O.

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Dow Wire Works Co., Louisville, Ky.

Dufur & Co., Baltimore, Md.

Dwiggins Wire Fence Co., Anderson, Ind.

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Ludlow-Saylor Wire Co., St. Louis, Mo.

New Jersey Wire Cloth Co., Trenton, N. J.

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Filters. (Water.)

Hammond Iron Works, Warren, Pa.

Industrial Water Co., New York, N. Y.

Kennicott Water Filter Co., Chicago, Ill.

N. Y. Continental Jewell Filtration Co., New York, N. Y.

Scalfi, Wm. B., & Sons, Pittsburgh, Pa.

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Johnson, J. & Co., New York, N. Y.

Perrin, Wm. R., & Co., Chicago, Ill.

Stilwell-Bierer & Smith-Valle Co., Dayton, O.

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Garden City Sand Co., Chicago, Ill.

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Powerhouse Clay Mfg. Co., Richmond, Va.

Reese-Hammond Fire-Brick Co., Bolivar, Pa.

Stevens, H., Sons Co., Macon, Ga.

Fire Extinguishers.

Bailey-Lebby Co., The, Charleston, S. C.

Charles Co., B. H., Quincy, Ill.

General Fire Extinguisher Co., Providence, R. I.

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Kennedy, Walter, Pittsburgh, Pa.

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Crosby Steam Gauge & Valve Co., Boston, Mass.

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Smythe Co., The S. R., Pittsburgh, Pa.

Wood, R. D., & Co., Philadelphia, Pa.

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Cochran Co., Lorain, O.

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Chicago Knife Works, Chicago, Ill.

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Lumber and Hardwoods. Hallam, W. W., Macon, Ga.

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American Machinery & Foundry Co., Hanover, Pa.

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Affle, G. George E., New York, N. Y.

American, Chicago, Ill.

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Metallic Tubing. (Flexible.)

Flower, Walter L., & Co., St. Louis, Mo.

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Metal-Working Machinery.

American Tool Works Co., Cincinnati, O.

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Petroleum Iron Works Co., Washington, Pa.

Rockwell Engineering Co., New York, N. Y.

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Lunkenheimer Co., Cincinnati, O.

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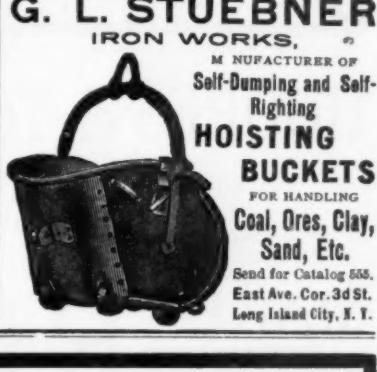
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No. 123A.



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 Bushnell Press Co., G. H., Thompsonville, Conn.
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 Williams, Milton F., & Co., St. Louis, Mo.
 Wood's, T. B., Sons, Chambersburg, Pa.
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 Dawson, A. L., & Co., Chicago, Ill.
 Dodge Mfg. Co., Mishawaka, Ind.
 Eckbold's Sons, Wm., Philadelphia, Pa.
 Edwards Machine Co., Chicago, Ill.
 Eversen, B. M., Pittsburgh, Pa.
 Fairbanks Co., Baltimore, Md.
 Gurney Mfg. Co., Roan Mountain, Tenn.
 Ohio Pulley Co., Marion, O.
 Saginaw Mfg. Co., Saginaw, Mich.
Pulleys. (Pneumatic.)
 Williams, Milton F., & Co., St. Louis, Mo.
Pulleys, Shafting and Hangers.
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 Caldwell, H. W., & Sons Co., Chicago, Ill.
 Crosson Co., Geo. V., New York, N. Y.
 Dodge Mfg. Co., Mishawaka, Ind.
 Egan Co., The, Cincinnati, O.
 Fairbanks Co., Baltimore, Md.
 Fairmount Machine Co., Philadelphia, Pa.
 Fay, J. A., & Co., Cincinnati, O.
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 Gordon's Foundry & Machine Co., Columbus, Ga.
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 Jeffrey Mfg. Co., The, Columbus, O.
 Lane Mfg. Co., Montreal, Vt.
 Link-Belt Engineering Co., Philadelphia, Pa.
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 Maryland Foundry & Machine Co., Baltimore, Md.
 Morgan Smith Co., S., York, Pa.
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 Textile Mill Supply Co., Charlotte, N. C.
 Valley Iron Works, Williamsport, Pa.
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 Wolf Co., Chambersburg, Pa.
 Woods', T. B., Sons, Chambersburg, Pa.
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 McGowan Co., John H., Cincinnati, O.
 Park Mfg. Co., Charlotte N. C.
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 Cameron Barkley Co., Charleston, S. C.
 Cook Well Co., St. Louis, Mo.
 Dearborn Steel Pump Works, Indianapolis, Ind.
 Detroit Pump Co., Downsville, Pa.
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 Mason Regulator Co., Boston, Mass.
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 Pulsometer Steam Pump Co., New York, N. Y.
 Silwell-Bierce & Smith-Vale Co., Dayton, O.
 Synder Pump & Well Co., Richmond, Va.
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 Watson-Stillman Co., New York, N. Y.
 Wicker Bros., Pittsburgh, Pa.
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Pumps. (Trench.)
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 Cook Well Co., St. Louis, Mo.
 Dearborn Steel Pump Works, Indianapolis, Ind.
 Detroit Pump Co., Downsville, Pa.
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 Gardner Governor Co., Quincy, Ill.
 Mason Regulator Co., Boston, Mass.
 Quincy Engineering Co., Philadelphia, Pa.
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 Berck & Co., Cambridge City, Ind.
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 Niagara Machine & Tool Works, Buffalo, N. Y.
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 Rand Drill Co., New York, N. Y.
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 Birmingham Rail & Locomotive Co., Birmingham, Ala.
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 Joseph, Joe & Bro., Co., Cincinnati, O.
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 Weir Frog Co., Cincinnati, O.
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 Steel Rail Supply Co., The, New York, N. Y.
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 Morse Twist Drill & Machine Co., New Bedford, Mass.
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 Mason Regulator Co., Boston, Mass.

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 Mason Regulator Co., Boston, Mass.

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Lunkenheimer Co., Cincinnati, O.

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Cameron & Barkley Co., Charleston, S. C.

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Frick Co., Waynesboro, Pa.

Hench & Dromgold, York, Pa.

Lane Mfg. Co., Montpelier, Vt.

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Sanders Mfg. Co., Dalton, Ga.

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Ludlow-Saylor Wires Co., The, St. Louis, Mo.

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Mundt & Sons Charles, New York, N. Y.

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 Miles, Franklin S., Philadelphia, Pa.

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 Brubaker, W. L., & Bros., Millersburg, Pa.

Polk, A. J., & Son, Millersburg, Pa.

Screw Saws. (See Woodworking Mch.)

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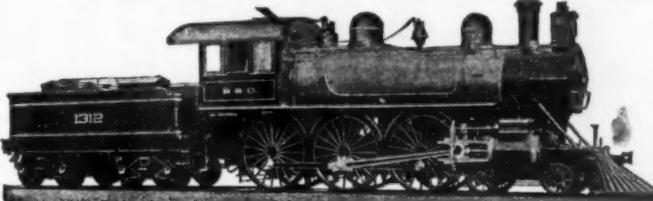
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Self Measuring Shop Oil Cabinet. Bowes & Co., S. E. Ft. Wayne, Ind.

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Separators. (Steam and Oil.) American Tool Works Co., Cincinnati, O. Austin Separator Co., Detroit, Mich. Bonar J. & Co., Pittsburgh, Pa. Harrison Safety Boiler Works, Philadelphia, Pa.

Shapers. American Tool Works Co., Cincinnati, O.

Sheet-Metal-Working Machinery. [See Metal-Working Machinery.]

Sheet Steel and Iron. American Sheet Steel Co., New York, N. Y.

Shingle, Lath and Slatte Machinery. [See Woodworking Machinery.] Lane Mfg. Co., Montpelier, Vt. Trevor Mfg. Co., Lockport, N. Y.

Ship Builders. (Iron and Steel) Newport News Shipbuilding & Dry Dock Co., Newport News, Va.

Skylights. Badger, E. B., & Sons Co., Boston, Mass. Downey Mfg. Co., Atlanta, Ga.

Merchant & Co., Inc., Philadelphia, Pa. National Skylight & Construction Co., New York, N. Y. Noordor Co., E. Van, Boston, Mass.

Slate. (Roofing and Blackboard.) Galt, John, & Sons, New York, N. Y. Genuine Bangor Slate Co., Easton, Pa. David McKenna, Slatington, Pa. Williams, J. E., & Co., Arvonia, Va.

Sisters' Tools. Galt, John, & Sons, New York, N. Y.

Smoke Stacks. (Iron and Steel.) Hammond Iron Works, Warren, Pa. Keeler, E. Co., Williamsport, Pa. Littleford Bros., Cincinnati, Ohio. Schoenfeld, J. S., Sons Co., Macon, Ga. York Mfg. Co., York, Pa.

Sopsmakers' and Butchers' Mchys. Dopp, H. Wm., & Son, Buffalo, N. Y.

Solder. Herts, Theo., & Son, St. Louis, Mo. Robins, A. K., & Co., Baltimore, Md. Ryan, J. J., & Co., Chicago, Ill.

Speaking Tubes. Baily, Chas. H., & Co., Chicago, Ill.

Springs. (Bicycle Saddle, Machinery, Railway and Spiral.) Baily, Chas. H., & Co., Chicago, Ill. Boston Belting Co., Boston, Mass. Cary Spring Works, New York, N. Y. French Spring Co., A., Pittsburgh, Pa. Latrobe Steel & Coupler Co., Philadelphia, Pa. Ludlow-Saylor Wire Co., The, St. Louis, Mo.

Spele. Herts, Theo., & Son, St. Louis, Mo.

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Stairways. (Iron.) Lykes, John D., Birmingham, Ala.

Stamp Mills. Mecklenburg Iron Works, Charlotte, N. C.

Standpipes. Birmingham Boiler Works, Birmingham, Ala. Hartley Boiler Works, Montgomery, Ala. Keeler Co., E., Williamsport, Pa. Means & Fulton Iron Works, Birmingham, Ala. Virginia Bridge & Iron Co., Roanoke, Va. York Mfg. Co., York, Pa.

Steam Gauges. Crosby St. Gage & Valve Co., Boston, Mass. Lunkenheimer Co., Cincinnati, O.

Steam Filters and Supplies. General Fire Extinguisher Co., Providence, R. I. Shaw, Benj. F., Wilmington, Del.

Steam Heating. General Fire Extinguisher Co., Providence, R. I. Keeler Co., E., Williamsport, Pa. Peck-Hammond Co., The, Cincinnati, O. Warren Webster & Co., Camden, N. J.

Steam Shovels. [See Dredges and Excavators.]

Steam Traps. American Blower Co., Detroit, Mich. Dyer, James, & Co., Chicago, Ill. Durst, T. & Co., Chicago, Ill. Eureka Iron Co., Chicago, Ill. Haines Co., W. S., Philadelphia, Pa. Mason Regulator Co., Boston, Mass. Sturtevant Co., B. F., Boston, Mass. Wright Mfg. Co., Detroit, Mich.

Steamship Lines. Atlantic Transport Co., Baltimore, Md. Bay Line, Baltimore, Md. Merchants & Miners' Trans. Co., Baltimore, Md. Richmond & York River Line, Baltimore, Md.

Steel. (Manufacturers of.) Acme Steel & Malleable Iron Works, Buffalo, N. Y. American Sheet Steel Co., New York, N. Y. Chester Steel Casting Co., Philadelphia, Pa. Latrobe Steel Co., Philadelphia, Pa. Tenn. Coal, Iron & R. R. Co., Birmingham, Ala.

Steel Couplers. (Automatic.) Latrobe Steel & Coupler Co., Philadelphia, Pa.

Steel Hoops, Bands. American Steel Hoop Co., New York, N. Y.

Steel Rods. (Polished.) Finished Steel Co., The, Youngstown, O.

Stokers. (Mechanical.) Westinghouse Machine Co., Pittsburgh, Pa.

Stoves, Ranges, etc. Sexton, S. B., & Son, Baltimore, Md.

Street Lamps. Dietz Co., E., New York, N. Y.

Structural Steel and Iron. American Bridge Co., New York, N. Y. American Steel Hoop Co., New York, N. Y. Bartlett, Hayward & Co., Baltimore, Md. Belmont Iron Works, Philadelphia, Pa. Morrison & Kindervater, Richmond, Va. National Skylight & Construction Co., New York, N. Y. Scaife, Wm. B., & Sons, Pittsburgh, Pa. Schreiber L., & Sons Co., The, Cincinnati, O. Virginia Bridge & Iron Co., Roanoke, Va.

Studs, Nuts. Hoopes & Townsend Co., Philadelphia, Pa. Miles Franklin S., Philadelphia, Pa. Milton Mfg. Co., Milton, Pa.

Sugar-Mill Machinery. Morris, Henry G., Philadelphia, Pa. Wolf Co., Fred, W., Chicago, Ill.

Switchboards, Switches, etc. Goss Incandescent Arc Light Co., New York, N. Y. Smith, Sam'l J., & Co., Charlotte, N. C. Western Electrical Supply Co., St. Louis, Mo. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

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Gem City Boiler Co., Davison, O. Harry Brothers Co., Dallas, Tex. Hartley Boiler Works, Montgomery, Ala. Hazelton Boiler Co., New York, N. Y. Keeler Co., E., Williamsport, Pa. Lombard Iron Works & Supply Co., Augusta, Ga. Littleford Bros., Cincinnati, O. Means & Fulton Iron Works, Birmingham, Ala. Petroleum Iron Works Co., Washington, Pa. Scaife, Wm. B., & Sons, Pittsburgh, Pa. Smith, E. S., Morgan, York, Pa. Valk & Murdoch Iron Works, Charleston, S. C. Virginia Bridge & Iron Co., Roanoke, Va. Wolf Co., Fred, W., Chicago, Ill. Wood, R. D., & Co., Phila., Pa. York Mfg. Co., York, Pa.

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Telephones. Alexander, Jr., Co., S. B., Charlotte, N. C. Bunnell, J. H., & Co., New York, N. Y. Western Electrical Supply Co., St. Louis, Mo.

Telegraph Instruments, & Supplies. Bunnell, J. H., & Co., New York, N. Y.

Telephone Poles. New Orleans Wood Preserving Wks., New Orleans, Pa. Tenney & Lumber Co., Lewisburg, Tenn.

Term Plate. Merchant & Co., Inc., Philadelphia, Pa.

Terra Cotta. Pomona Terra Cotta Co., Pomona, N. C. Warner Co., Chas., New York, N. Y.

Textile Machinery. [See Cotton Mill Mach.]

Tinplate. Merchant & Co., Inc., Philadelphia, Pa.

Tires, Steel. (Locomotive and Car.) Latrobe Steel Co., Philadelphia, Pa.

Tobacco Machinery. American Machine & Foundry Co., Hanover, Pa. Buckeye Iron & Brass Works, Dayton, O. Cardwell Machine Co., Richmond, Va.

Tools. (Mechanics') American Tool Works Co., Cincinnati, O. Besly, Chas. H., & Co., Chicago, Ill. Landis Tool Co., Wayneboro, Pa. McCabe, J. J., New York, N. Y. Morse Twist Drill & Machine Co., New Bedford, Mass. Pratt & Whitney Co., Hartford, Conn. Williams, J. H., & Co., Brooklyn, N. Y.

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Tools. (Tinners') Niagara Machine & Tool Works, Buffalo, N. Y.

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Ventilators. Downman Mfg. Co., Atlanta, Ga. Pancost International Ventilator Co., Philadelphia, Pa. Van Noorden Co., E., Boston, Mass.

Wagon Builders' Mchys. & Supplies. Cordesman, Meyer & Co., Cincinnati, O. Egan Co., The, Cincinnati, O. Fay, J. A., & Co., Cincinnati, O.

Washers. (Olive and Phosphate.) Aultman Co., The, Canton, O. Bailey L. & T. The, Chateado, S. C. Cameron & Barkley Co., Charleston, S. C. George Foundry & Machine Works, Rome, Ga. McLanahan-Sims Machine Co., Hollidaysburg, Pa.

Watchman's Clocks. Baily, Chas. H., & Co., Chicago, Ill. Nanz & Co., New York, N. Y. Textile Mill Supply Co., Charlotte, N. C.

Water and Electric Power. Roanoke Nav. & Water-Power Co., Weldon, N. C.

Water Softening Apparatus. (Purifying.) Industrial Water Co., Newark, N. J. Kempton Water Softening Co., Chicago, Ill. Scaife, Wm. B., & Sons, Pittsburgh, Pa.

Water-Wheels and Turbines. Alcott, T. C. & Son, Mt. Holly, N. J. Ladd Mfg. Co., Montpelier, Vt. Leffel, James & Co., Springfield, O. Smith Co., S. Morgan, York, Pa. Silwell-Bierce & Smith, Valle Co., Dayton, O. York Mfg. Co., York, Pa.

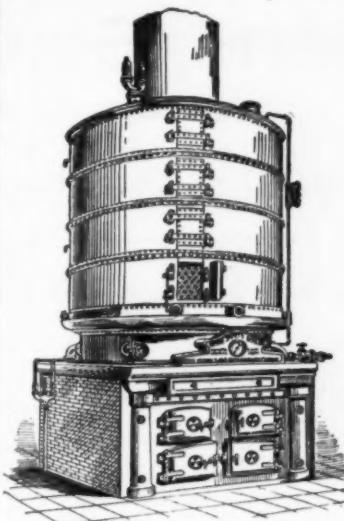
Water Motors. Pittsburg Meter Co., E., Pittsburg, Pa.

Water Troughs. (Steel.) Clarendon Boiler Works, N. Clarendon, Pa.

Water Works and Sewerage. Flint & Walling Mfg. Co., Kendallville, Ind. Nickel, M. & F., Mobile, Ala. Weatherhead & Hildebrand, Memphis, Tenn. Wood, R. D., & Co., Philadelphia, Pa.

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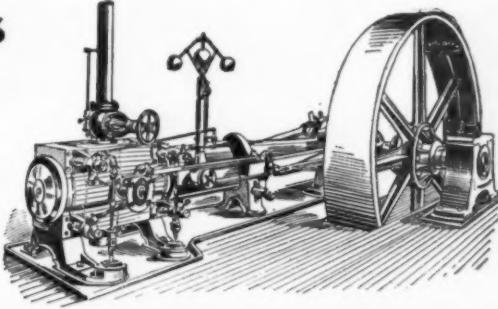
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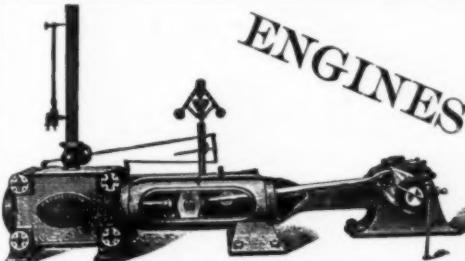
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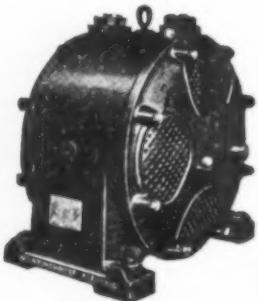
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Austin Mfg. Co., F. C., Harvey, Ill.

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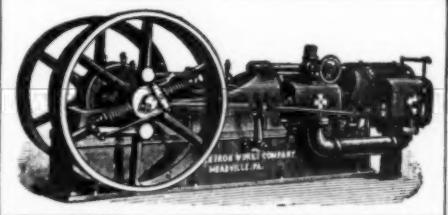
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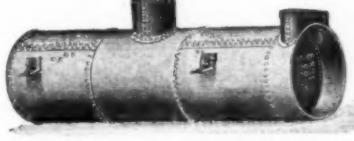
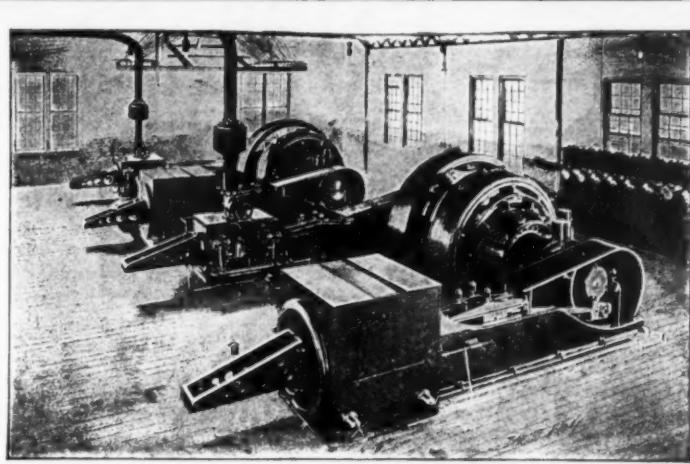
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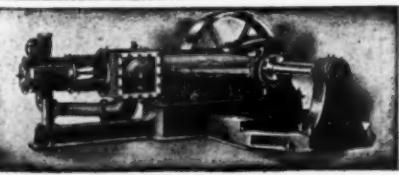
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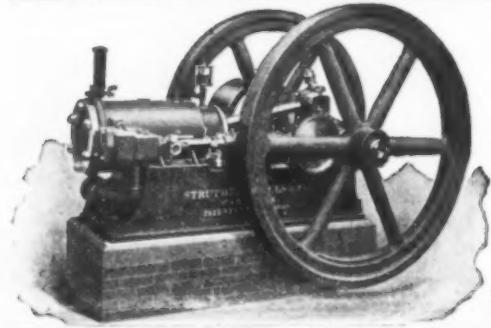
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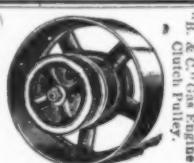
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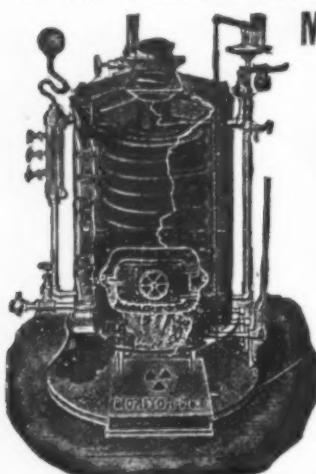
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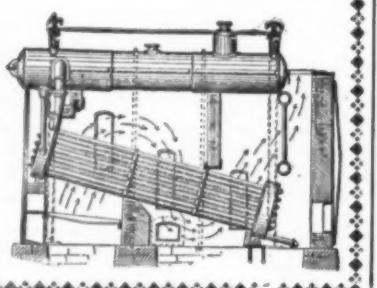
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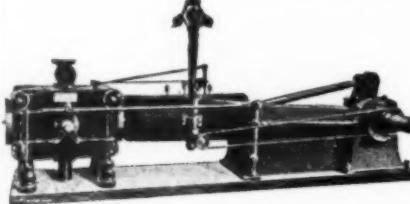
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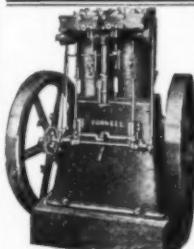
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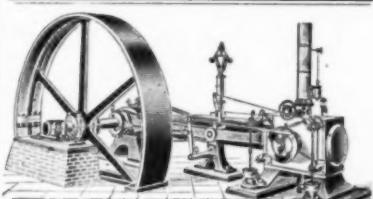
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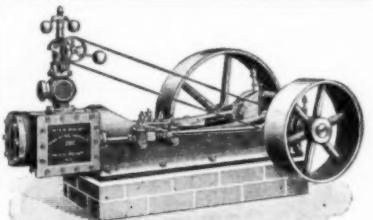


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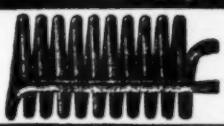
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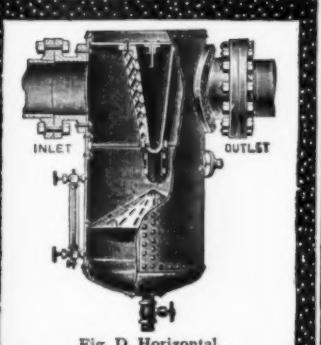


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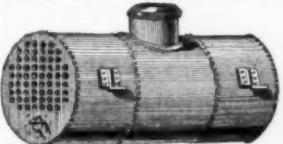
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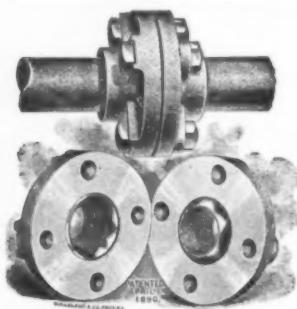
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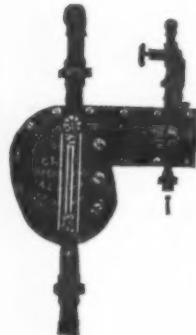
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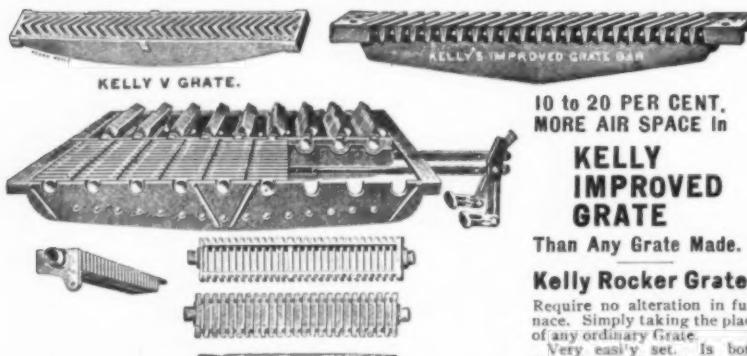
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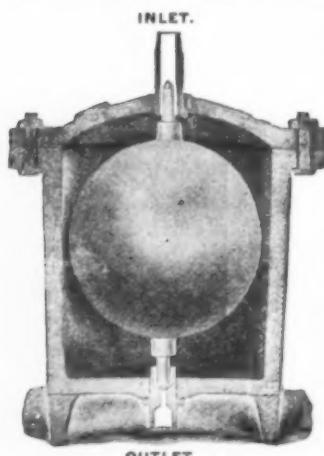
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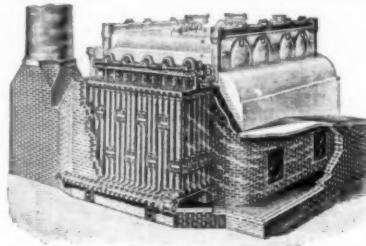
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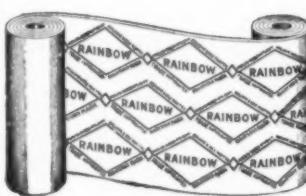
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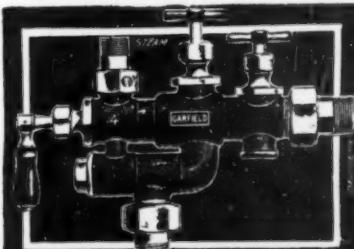
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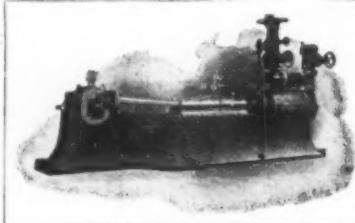
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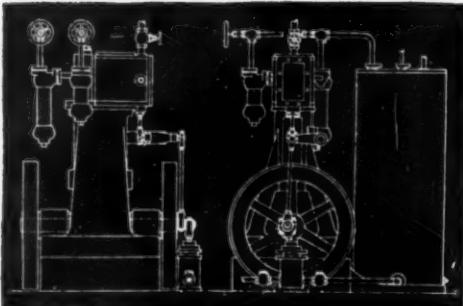
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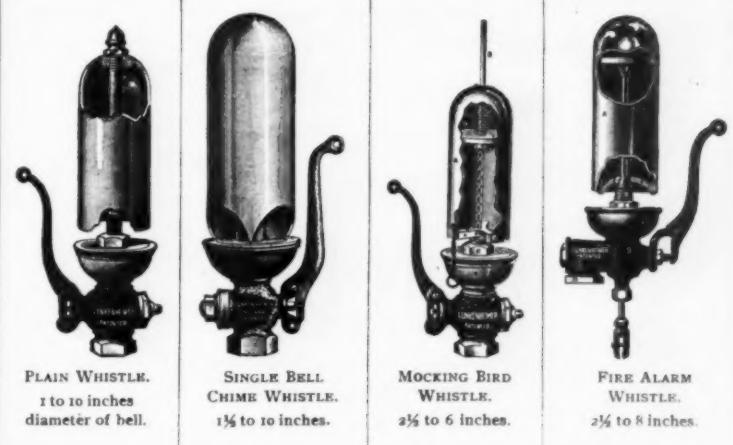
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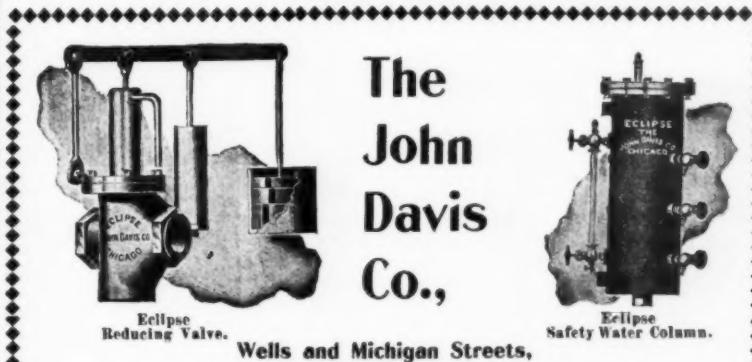
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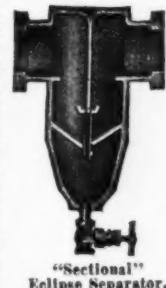
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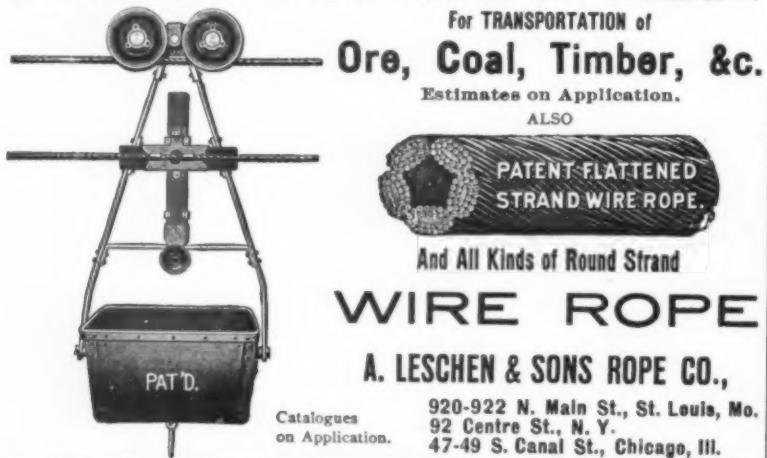
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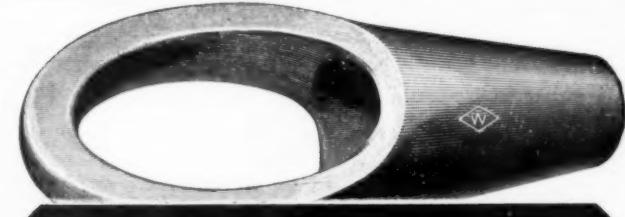


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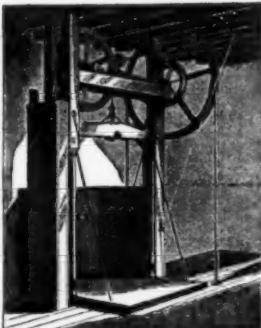
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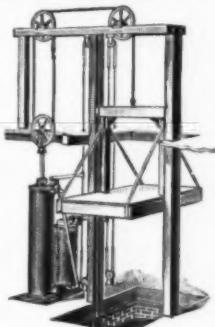
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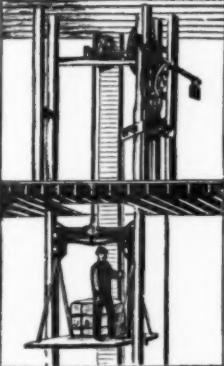
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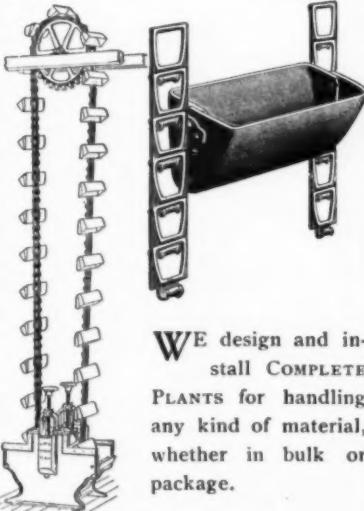
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The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

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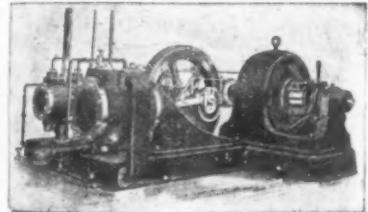
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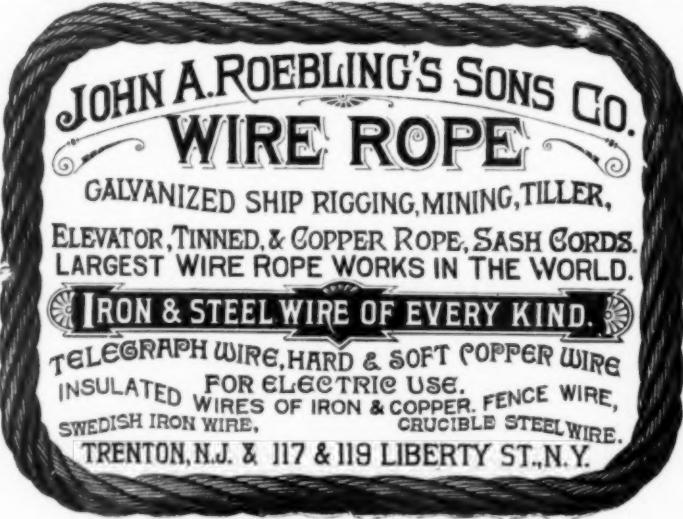
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Forestry and Lumbering.

For several years Mr. George W. Vanderbilt, on his estate at Biltmore, N. C., has been giving to the South and to the country a magnificent object-lesson of the value of scientific handling of forests. Such an object-lesson has been greatly needed. Much of the advance made by the South as a producer of lumber has been due to the failure in other parts of the country to adopt plain common-sense methods in lumbering operations. Immense tracts of timber land have been denuded by the wholesale, with a great waste of cut timber, destruction of younger growth and an absolute disregard of the future. With the transfer of energies to the South and an acceleration of those already there like carelessness and lack of foresight have been manifested. The efforts of the forestry division of the United States Department of Agriculture, culminating in the plan for a vast forest reservation at the summits of the Appalachians in five or six Southern States, and the work of such progressive men as Mr. Vanderbilt, have done much to fasten the attention upon the necessity for a conservative handling of the forests still standing in the South, and a restoration of woodland in regions devoted wholly to agriculture or left to waste after the turpentine workers and lumbermen have wrought their work.

One State in the South which has come to the front as a lumber producer

seems destined to become the leader in the adaptation of common sense and science to lumbering undertakings. In connection with the organization of the \$20,000,000 Houston Oil Co. the statement was made that it had entered into a contract with the Kirby Lumber Co., organized at the same time, for the sale and manufacture of the timber on the 1,000,000 acres of its oil lands in Texas. This contract involved the cutting of 8,000,000,000 feet of timber at the rate of not less than 350,000,000 feet a year. If the minimum only shall be cut, nearly twenty-three years will cover the contract. Under ordinary conditions it might be expected that the close of those twenty-three years would show a vast tract of waste land at the mercy of the elements. The contract between the oil company and the lumber company contemplates no such thing. It looks to the exploitation of the forest, and at the same time to its indefinite preservation, if not cultivation. No tree less than one foot in diameter is to be cut, and care is to be had that saplings and other young growth are to be uninjured. The results of this undertaking may be easily estimated for the particular tract. They mean a source of steady wealth. They may be duplicated in other parts of the South. It is hoped that they may be.

Why Massachusetts Prospects.

In the census of 1890 Massachusetts reported 26,900 industrial establishments, with an output of \$888,000,000. There has been an enormous growth in industry in the State since then, clearly indicated by statistics of manufactures just issued by Hon. Horace G. Wadlin, chief of the State bureau of statistics of labor. The figures are for 1900, in comparison with 1890, and cover but 4656 representative establishments in eighty-seven classified industries. In the twelve months the capital invested increased from \$448,709,260 to \$456,685,248, or \$7,975,988, equal to 1.78 per cent. The largest amount of capital invested in 1900 was in cotton goods, yarn and thread, more than \$250,000,000. Boots and shoes and parts of them represented more than \$50,000,000, machines and machinery more than \$40,000,000, and woolen goods more than \$45,000,000. The stock used in manufacture increased from \$419,301,108 to \$455,224,455, or \$35,923,347, an increase of 8.57 per cent. The greatest increase in percentage was in cotton goods, 29.84, followed by machines and machinery 25.12, woolen goods 18.85, carpets 13.32, paper 10.48, shipbuilding 30.01, hose 32.49, hosiery and knit goods 23.20 and agricultural implements 21.16. The aggregate value of the goods made increased from \$736,695,255 to \$799,353,677, an increase of \$62,658,422, or 8.51 per cent. Of this production 30.91 per cent. was in establishments controlled by private firms, 60.26 per cent. in corporate establishments and 8.83 per cent. in establishments controlled by industrial corpora-

tions. The wages paid increased from \$156,979,841 to \$167,449,273, while the average number of employees advanced from 367,118 to 380,941. These persons worked an average of 290.43 days in 1900, a decrease of 3.72 days under 1890, while the average yearly earnings per individual advanced from \$427.60 to \$439.57, or \$11.97. The average proportion of business done reached 66.82 per cent. in 1899 and 66.65 per cent. in 1900 of the full productive capacity of the establishments included in the report.

The full returns of all establishments for 1900 are yet to be reported by the national census. The splendid piece of work done by the State bureau for less than one-fifth of the total number of industries points to a magnificent showing for the State, which early in its history had to learn to make things in order to live, and which has ever since been a striking illustration of the ability to succeed upon a basis of material brought from afar and of the value of doing things. In 1890 Massachusetts had an industrial output valued at \$10,000,000 more than the industrial output of all the Southern States from Maryland to Texas. It is believed that 1900 will not reveal such an enormous disparity between one State and fourteen. When, however, is considered Alabama, with its vast storehouses of raw material, which Massachusetts has to acquire for industry, or Texas and Arkansas, still to be developed, and other States, with their varied wealth of resources, the question naturally arises, how long will it be before one Southern State will be able to make the showing in all its industries that Massachusetts has made for 4645?

The South never felt the necessity to devote its greatest energies to manufacturing. Its agriculture, dominated by such staple crops as cotton and tobacco, turned its people's attention rather to supplying other sections with the material for industry. The same elements were a bar to the growth of a great army of men trained to work in machine shops, foundries and factories. There were in the old days far-sighted men who successfully demonstrated the value of manufacturing for the South, and with the removal of the institution of slavery a beginning was made for a general extension of their plans. Now manufacturing and commerce are attracting to their ranks an ever-increasing number of men, long-neglected material above ground and below is being uncovered, and with the exploitation of a fuel supply sufficient, probably, for the needs of the world, the South has been given an enormous impetus in its industrial progress. It must come into its own some day. In the meantime it welcomes the news of the prosperity of Massachusetts and seeks to acquire the skill and organization to effect like prosperity for itself.

Within two years, under the auspices of its old Business League, Memphis, Tenn., secured fourteen manufacturing concerns, one of which had a capital of

\$500,000 and employed 300 men. The effort being made to revive the league in recognition of the value of such an organization as a center of prompt and reliable information for persons seeking to know of the opportunities possessed by Memphis, and of united efforts to induce outsiders to seize the opportunities, ought to succeed. The experience of other Southern cities, as well as its own, has demonstrated the usefulness of such a body of enterprising men. It ought not to be difficult for Memphis to produce 200 men willing to insure the revival of the league by becoming members. The success of the plan will be welcomed by everybody who knows what Memphis can do, and who is delighted at every legitimate undertaking which may spread abroad the knowledge of its potentialities.

Self-Help Encouraged.

The Georgia School of Technology, especially devoted to engineering, chemistry, mechanical, electrical, civil and textile engineering, has undertaken to publish quarterly a statement of its work. The first number of this publication is full of information about the organization and scope of the institution, and is especially interesting for its information about the textile department known as the Aaron French Textile School. The foundation for this department was laid in December, 1897, when the State legislature appropriated \$10,000 for it on condition that friends of the school should contribute \$10,000 additional in money or machinery. During the next year nearly \$20,000 worth of machinery and \$10,000 in cash were donated, and the building, 150x70 feet, three stories high, with accommodations for machinery, classrooms, etc., was completed. Mr. Aaron French of Pittsburg had become interested in the school before the legislature made its first appropriation. When the conditions of that were called to his attention he gave \$2600 in cash and \$3000 additional on condition that \$3000 more should be raised in other ways. This offer was promptly met by an appropriation of \$3000 by the city of Atlanta, and a third donation of \$3000 by Mr. French enabled the trustees to increase the size of the textile building. In addition, Mr. French has given \$6500 for maintenance of the school, and has founded two \$500 scholarships. His liberality led to naming the school in his honor, and its establishment gives the youth of Georgia an opportunity for instruction in the manufacture of all grades of cotton goods, and will certainly promote interest in the textile industry in the State.

Worthy of more than mere record are the two scholarships founded by Mr. French, and especially the conditions attached to them. They run for four years, the winners to be furnished funds at such times as the president of the school may think necessary for expenses, books, fees, etc., but not more than \$125 a year. No one may receive

a scholarship whose family pays taxes on more than \$3000 worth of property, and the beneficiaries are bound to refund the money after graduation in small monthly notes without interest. In this way the scholarships become self-perpetuating, and the recipients are free from the possibility of the ills resulting from a feeling of dependence.

This idea might be extended with benefit to plans for scholarships in other institutions of the South.

By No Means an Army.

Referring to the advisability of New York city's making a good exhibit at the Charleston Exposition next winter, the New York Commercial says:

New York has always responded promptly and liberally to every call of distress from the South. Will the business men of the city and State turn a deaf ear to the suggestion that, by putting up a comparatively small amount of money, they may now secure a commercial advantage through adequate representation at a great Southern exposition? New Yorkers, it must be confessed, are not easily frightened, especially into a thing of this sort, and they have an indistinct recollection of a small army of Southern business men being mightily disappointed by their quite recent reception and subsequent treatment at the hands of their Quaker hosts. But that is neither here nor there.

We imagine that the reference in the last paragraph is to the meeting of the Philadelphia convention under the auspices of the so-called Southern Industrial Association. If that be so, we take the liberty to suggest that the New York Commercial appears to have an impression of that gathering the reverse of the facts. The Philadelphians were most liberal and hospitable in their reception of their Southern guests and their treatment of them. Certainly the delegates could not have been disappointed, though some of their speakers may have wondered in their megacephalic condition why busy men were unwilling to hear them thresh over the straw of hoary speeches. Philadelphians had a right to be disappointed. They had raised \$10,000 and had planned elaborate diversions upon the strength of statements that at least 1000 representative Southerners were coming to Philadelphia. Among the men who actually came, not more than 200 in number, was rather a small proportion of representative business men.

War Rumors vs. Facts.

Judging from a report by United States Consul Henry W. Diederich at Bremen of the depressed industrial condition in Germany, that country would hardly seem in a position to engage in rivalry with any great nation. Still, the talk of a European combination, with Germany as one of the principals, against the trade advance of the United States continues. One of the latest reports in this connection is that negotiations are in progress for a commercial alliance of Germany, Austria-Hungary and Russia. A singularly clear view of the futility of this plan is presented by the London Iron and Coal Trades Review, which discredits the statement. The Review contends that none of the countries named has as yet been much injured by the American invasion, and that such an alliance could hardly prejudice the progress of the American export trade unless it were based on underselling American goods, both in the foreign and domestic markets. It gives scant support to the idea of a tariff war founded on discriminating duties against the United States, and suggests by significant figures of the movement

of American imports and exports of iron and steel for the past ten years, the difficulties in the way of carrying a trade war to a successful conclusion. It says:

The general community should be better advised than it is as to the character and the extent of the development which has taken place during recent years in the exports of American manufactures. The increase in metals, in implements, in wood, mineral, chemical, leather, cotton, paraffin and paper manufactures of all kinds has been portentous, and suggests the reflection that if the same rate of progress is maintained in the future, there will be and by little left for other nations to do. * * *

It is, no doubt, true that the value of the exports of the United States to Europe has enormously increased within recent years, and in 1900 it amounted to not less than \$1,029,000,000, or 74.60 per cent. of the total American exports to all the world, against \$64,750,000 to Asia, \$19,500,000 to Africa, \$176,500,000 to North America, \$38,750,000 to South America and \$42,750,000 to Oceania. The grand total represented by these figures is \$1,371,000,000, and this compares with a corresponding total of \$1,032,000,000 in 1897. In the interval the progress made has been stupendous.

In the fiscal year 1900 the total exports of United States' merchandise to the three countries already named, and to the United Kingdom, were as under:

Country.	Value.	Percentage of total to Europe.
Germany.....	\$184,648,000	13.44
Austria-Hungary.....	6,826,000	0.51
Russia—Baltic & White Seas.....	6,183,000	0.44
Russia—Black Sea.....	1,240,000	0.09
United Kingdom.....	527,784,000	38.28

These figures show that the exports of the produce of the United States to the United Kingdom is about three times as much as the exports to Germany, Austria-Hungary and Russia put together, and that the total exports of American produce to these four countries is rather more than one-half of all the exports of such produce to the whole of Europe.

So far as the figures quoted can guide us to a conclusion, there is but little apparent cause for a combination against the United States on the part of the three countries that are said to be moving in that direction. Great Britain stands in a different category, but it is not in the least degree likely that we shall attempt anything of the kind, both because we have already parted with our birthright in so far as tariff negotiations are concerned, and because we cannot do without the food supplies which America now sends us in such abundance. All the same, the economic situation for Europe is becoming increasingly grave, in face of the figures we have quoted.

These facts and figures should have some weight with the nations of the Continent which seem to be alarmed at the progress of the United States. And the most potent fact of them all, perhaps, is that suggested by the statement that Great Britain cannot do without the food supplies from America. That directs the mind to a situation hardly paralleled beyond the limits of the United States, for this country is able not only to produce manufactured goods for export, in the meantime feeding its workmen, but it has enough to come to the relief of its friends across the water. The army that can spare both weapons and food supplies is rather a hard customer to deal with if it does not sleep upon its advantages.

Extending Textile Training.

Mr. Arthur Whittam, director of the textile school at the Agricultural and Mechanical College at Starkville, has already shown himself a power for the good of the school not only in securing donations of machinery and money, but also in beginning a campaign which will increase interest in the school and will tend to give its work an immediate practical end. One of the best pieces of work in this direction is the publication by him of facts showing the benefit to be derived by the farmer, the merchant and the business man by the

establishment of a 5000-spindle cotton factory at Starkville. He suggests as benefits to the cotton farmer a higher price for his cotton sold at his own door, immediate cash returns for food products, ability to raise cotton at cheaper cost, and therefore, when necessary, to sell at lower price than others, and consequently to maintain the successful competition of the South as a cotton-grower. The advantages to accrue to the community are many, he thinks. Much of the money spent in the construction of the mill would be paid to artisans, and naturally find its way into the circulation of the town, while the wages distributed to mill operatives would be redistributed to local traders and merchants, and thus gradually add to the accumulated wealth of the place. He regards the location of the textile school as particularly favorable for the success of a mill at the same place, inasmuch as the institution will supply superintendents, overseers, etc., and will be able to give to the mill the advice of experienced millmen and specialists in particular branches of the industry.

As indicative of this advantage he instances the offer of persons interested in the Hargrove Cotton Mill of Shreveport, La., of \$30,000 to secure the location of a textile school in that city. This recognition of the value of textile training in the South is encouraging. It was certain to come with the success of schools already established there and in other parts of the country. It ought to result in increasing liberality in the support of schools already established, if it does not lead to the organization of others.

The Southern Farm Magazine.

July and August are the two months of the year when, in these latitudes, thunderstorms are most frequent and have most appalling results. They are wonderful manifestations of a power of which man knows but little, and their freaks are often startling and curious. Some of them which have occurred in recent years are described in the August number of the Southern Farm Magazine. In the same number is the jocular story of an industrial convention with no reason for its gathering and no practical results, the suggestion being that actual conventions are often of about the same character. Other articles of particular interest are the conclusion of a paper by Col. J. B. Killebrew on red clover and its culture, in which are given some practical hints about cloverseed, a detailed description of a cheap plant for handling sugar-cane in Georgia and Florida by Professor Stockbridge of the Florida agricultural experiment station, a sketch of the vast improvements which have been made in agricultural implements, and something about the food of the toad, with special reference to its value to the gardener and the farmer, and a paper by Prof. Thomas Shaw on feeding cattle for beef.

The editorial, literary and family departments are full of timely original and selected matter up to its usually high standard and calculated to while away pleasantly many an hour of late summer.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

The Chamber of Commerce of Huntsville, Ala., has published the fourth edition of its little handbook on North Alabama and Huntsville. It is written for the benefit of persons who wish to improve their condition, their surroundings and their health, and contains in con-

densed form a mass of practical information for persons interested in manufacturing, agriculture and general business conditions.

Wants Machinery for South Africa.

The South African Trading Co. of Copenhagen, in a letter under date of July 10 to the Manufacturers' Record, says:

"We shall be glad if you will kindly furnish us with estimates from some of the best American manufacturers for the following complete plants, which we intend to erect in South Africa. Prices should be f. o. b. U. S. A. port, or better, c. i. f. Port Natal, including:

"Saw-Mill Machinery—One circular saw for cutting deals flat and deep 3 inches to 4 inches by 9 inches to 12 inches; one band saw for cutting logs (especially teak) up to 30 inches; one turning machine for turning rails, balusters, etc.; one planing machine; one molding machine to plane moldings 1½, 2, 3, 4, 5, 6, 7 and 9 inches. Dynamo or boiler for above machinery.

"Soap Factory—Complete plant, including boiler or dynamo (give price for both), for a small factory of household soaps and cheap toilet soaps. Please give full detailed description.

"Tobacco Factory—Complete plant, including tobacco leaf cutting machine (capacity 1500 pounds per day), drying machinery, fermenting and packing machinery, with full description. Dynamo or boiler for same. Price of decorated tins for tobacco, one-quarter, one-half and one pound, square and round; price per gross. Send samples if possible.

"Brickmaking machinery complete for turning out 1,020,000 bricks (common ones) per day. Full description wanted, also price for boiler or dynamo.

"Lifting Crane—A good lifting machine to shift logs up to five tons weight. The crane is required for fixing in timber shed 150x150 feet long in such a way that the crane can be moved through the entire length of shed on rails placed alongside the walls about sixteen feet from the ground. If you know of a better way of moving logs, kindly let us know.

"Rails (narrow gauge) and two small iron cars for moving timber in yard; length of rails about 150 feet, which should be of a pattern easy to remove to place required.

"All machinery to be of newest inventions and best makes, with full particulars as to space of building required, also approximate consumption of coal or electricity. If prices cannot be given c. i. f. Port Natal, weights of each complete plant should be given to enable us to calculate freight and expenses.

"Thanking you in anticipation, we await your views at an early date."

The Commercial Club of Birmingham is about to issue a statistical statement prepared by its secretary, J. B. Gibson, giving valuable information about the iron center of the South. The figures show that the population of Jefferson county, in which Birmingham lies, has increased from 23,272 in 1880 to 140,420 in 1900; that the number of cars handled by the Alabama Car Service Association in 1900 was 455,631, an increase of 76,309 over 1899; that 126 mines employed 14,294 miners and produced 8,273,362 tons of coal; that 5000 men dug 3,095,406 tons of iron ore from which was produced 1,155,583 tons of pig-iron. The estimate is made that in the Birmingham district are 200 manufacturing plants employing 45,000 persons and expending \$500,000 a month in wages.

Seventeen million pounds of leaf tobacco were sold last year at Wilson, N. C.

SENATOR ELKINS TALKS.

His Views of the South's Material Advancement.

"I was born in Ohio, but I am a Virginian," said Stephen B. Elkins, looking out upon that view of views to get which he selected the site of his West Virginia home. I had just spoken of how both of us, after sojourning for some years in the West, had at about the same time come to live within the limits of the great original breeding-ground of American pioneers, developers, expansionists—the area embraced within the two Virginias.

"The blood in my veins," continued the senator, "is all Virginia blood, with the pioneer instinct uppermost. My ancestors crossed these very mountains westward bound, little dreaming, however, that they were passing through what would, with the coming of the twentieth century, be the most stirring scene of the very kind of activity (i. e., material development) they were bent upon. It is likely, though, that they took little account of this region of interminable mountains, and afterward remembered it only for its sublime scenery, its clear, bold streams, its glorious rhododendrons, its gigantic but then worthless forests. The time was not at hand for the exercise here of that eager energy which characterized the Virginian going forth to fulfill his destiny as a conqueror and developer of new empires.

"It was my innate, bred-in-the-bone fondness for doing what they went out to do that swept me westward to the Rocky mountains. But when afterwards I found out what West Virginia had wherewith to tempt the venturesome pioneer, I quickly concluded that in the Alleghanies, and not the Rockies, was where I belonged. And so I came home, not to sojourn, but abide. I told Senator Davis that right here was the land of opportunity, the field for energetic activity, and joined hands with him in his development work. A great many people are now engaged in this sort of work all over West Virginia, but only a start has yet been made.

"Though so long delayed, the opening up of West Virginia could not, in the nature of things, have been begun very much sooner. It had to wait for the incoming of the era of transportation and mechanical appliance.

In more level countries, where the axe, the grubbing hoe and then the plow were the instruments of progress, the work began with the advent of stout-hearted muscle. But here, where the sources of wealth were mainly in the mountains, the work of development had to await the building of railroads, the improvement of machinery, and, what was of more consequence than everything else, the wants of the world.

If the world's wants had not grown so wondrously in the last few years West Virginia would not be the scene of any very considerable activity. The world today wants all the lumber West Virginia can supply, and all the oil, but the pace of her steady progress will be set by the world's demand for coal. With increasing coal consumption will our State reap the fruits of her richest inheritance. The world's wants and means to supply them thus become a question of greatest direct interest to West Virginia, as, in fact, it is to all sections whose available resources are being inadequately developed.

"Our people are beginning to know and understand that American commercial expansion means more bread and meat to them. I think they understand this more vividly than the people of some of the other Southern States, especially those whose industrial education has been somewhat neglected. There is nothing

so vitally important as for a people to be brought to realize what will and what will not really better their conditions. Your paper, the Manufacturers' Record, has been doing for the South a great and good work in this behalf, which ought to be kept up with increasing zeal.

"It is purely a matter of persistent and well-directed educational work to awaken the people of any section of the country to the necessity of supporting measures that will hasten the development of their resources.

"In the manufacturing States the subject of wider markets and better transportation facilities is constantly kept before the public mind, constituting a popular theme of discussion, but the actual need for wider markets and more adequate shipping facilities comes even closer home to the people in those States whose resources are lying neglected than where 'going' industries are already large and diversified.

"For, with the faintest suspicion of depression or suggestion of overproduction every movement looking to the opening of new mines or the establishment of new industries is instantly checked, while the 'going' concerns keep going until the 'pinch' begins to be actually felt. As everyone knows, there come across the industrial skies a dozen clouds threatening enough to stop new development to one that brings the storm which stops work already started. But the people of West Virginia are beginning to be pretty wide-awake to their best interests, and ready to stand heartily by whatever is calculated to promote the general welfare."

"And will the development work which you and Senator Davis have been doing so vigorously for years be kept in hand? Will you keep on building railroads, opening mines, constructing plants?"

"Well, the innate love of doing that sort of thing we talked about just now has not lost one whit of its intensity, so far as I am concerned; in fact, I couldn't be happy without having my hands full of the kind of work I like best. And what is more, I have not the remotest idea of ever moving away from this State. It is my honest conviction that West Virginia and the contiguous parts of old Virginia will before long become as productive, as prosperous and as populous as Pennsylvania is today."

His speaking of old Virginia put it into my head to ask him what was the real meaning of a surveying party (said to be in the employment of the Davis-Elkins people), which has lately been observed at work along a line reaching from the West Virginia coal fields in the direction of deep water. Said I:

"Some of your surveyors were seen not so very far from my little farm over near Staunton."

"As you are a farmer," said he, before I finished the intended question, "maybe you'd like for me to show you my little farm." And then he took me through the shaded rhododendron-lined walks of the stately park around his house, down to see his dairy, his chicken-house and his hay fields. Though he forgot to say a single word in response to my query about the engineers, I left him thinking to myself about like this: "For ought I know, it may be among the plans of the Pennsylvania Railroad (which controls the C. & O. and the B. & O.) to hold down the output of West Virginia coal, as has been alleged, and possibly to discourage the opening of new mines; but 'the best-laid plans of mice and men gang aft agley.'"

THOMAS P. GRASTY.

Mr. Oscar Swineford, Richmond, Va., in a letter to the Manufacturers' Record says: "Possibly one of the most remark-

able locations for a manufacturing plant in the country is to be found at Chester (Chesterfield county, Virginia), twelve miles from Richmond, Va. It comprises within the neighborhood of twenty acres of unoccupied ground. It is partly graded, and has the Atlantic Coast Line on one side, the Greater Seaboard Air Line on another, and an electric passenger and freight railway running from Richmond to Petersburg on another, and the Farmville & Powhatan Railroad on the fourth. The latter road runs from the Virginia coal field, about fifteen miles away, to deep water on the James river, only about nine miles."

FOR PRACTICAL FORESTRY.

Plans of the Kirby Lumber Co. in Southeast Texas.

Of widespread interest to the South, and, it is hoped, of practical advantage as an incentive to imitation, will be the news that the plans of the Kirby Lumber Co., recently reported in the Manufacturers' Record, contemplate the practical application, it is believed, for the first time in the history of the American lumber trade, of forestry methods by a private individual or corporation. The Houston Oil Co., incorporated in Texas with a capital of \$30,000,000, has acquired, as already announced in the Manufacturers' Record, for the purposes of its oil business, large tracts of land in the oil belt of Eastern Texas, and has contracted to sell to the Kirby Lumber Co., capitalized at \$10,000,000, yellow-pine timber of not less than twelve inches in diameter, standing upon these lands, to the aggregate amount of 8,000,000,000 feet. The contract provides for the removal from these lands and the manufacture of a minimum of 350,000,000 feet per annum.

The Kirby Lumber Co. intends to enter immediately upon its business. It will manufacture in Angelina, San Augustine, Sabine, Liberty, Polk, Tyler, Orange, Jasper, Newton and Harden counties, Texas, and in Calcasieu parish, Louisiana. It has arranged for the acquisition of a number of mills already operating in certain of these counties, and will shortly begin the erection of additional mills to bring up its annual manufacturing capacity to the minimum agreed upon.

The area in which the company is to operate lends itself readily to the policy of conservation of forest growth, which has been adopted. It has for its basis a forest area of not less than 1,000,000 acres, which are naturally self-reproductive, the numerical percentage of small standing trees being very large. That the plan of scientific forestry methods will not be abortive is shown by the provision of the contract under which the Kirby Company is to work, that "said timber shall be cut in a careful and prudent way, and the trees felled shall be so felled as to preserve the young timber and avoid abuse and injury to said young timber and saplings, and no trees under twelve inches in diameter shall be cut from said lands for skids or other purposes."

An important fact to be considered in estimates of the value of this timber undertaking is the entry into this forest of the Atchison, Topeka & Santa Fe Railroad system. About a year ago this company purchased the Gulf, Beaumont & Kansas City Railway, running northward from Beaumont, and has since extended its own line near Beaumont. The entry into this territory of this great railway system means a largely-increased demand for the lumber of this region. The Atchison system now carries a large volume of grain to the Gulf for export. Its cars have been returning empty to the grain

fields of Kansas, Nebraska, Iowa, Missouri and Illinois. By its entry into this vast timber reservation the Atchison will secure loads for its northward-bound cars, and will greatly extend the territory reached by the mills of Southeastern Texas, this new territory furnishing a market which is steadily becoming a great lumber-consuming region. The combination of interests which has been created by these two great companies, the one to develop the oil business, the other the broadest plan for lumbering operations which has ever been inaugurated in the South, if not in the whole country, coupled with the railroad facilities to be provided, means a factor of tremendous influence for the material advancement of a large section of Texas. The results of the forestry operations will be undoubtedly studied carefully from many standpoints.

NORTH CAROLINA MINERALS.

Greater Activity Last Year Than Usual in Their Development.

Mr. Joseph Hyde Pratt, mineralogist, has prepared a paper for the North Carolina geological survey showing that last year there was greater activity in the development of mineral properties in the State than in any other twelve months for fifteen years past. This activity was favored by cheap labor, climatic conditions permitting nearly continuous mining through the year, the low cost of timber for lumber and cordwood, proximity to the railroads and to centers of mining supplies and an abundance of water-power. During the year, according to the report, the total value of the mineral production of the State was \$752,931, divided as follows:

Mineral.	Value.
Gold.....	\$44,636
Silver.....	15,956
Copper (6.48 tons).....	41,600
Iron (21,000 tons).....	42,000
Pyrite (5,000 tons).....	14,625
Corundum (205 tons).....	36,840
Garnet (300 tons).....	18,000
Mica (Muscovite).....	101,462
Talc (3500 tons).....	42,000
Kyanite (7000 tons).....	62,440
Gems.....	12,000
Monazite (454 tons).....	48,805
Rare Minerals (60 pounds).....	20
Stone.....	249,000
Coal (18,000 tons).....	22,500

Mr. Pratt points out that improved methods and machinery are making it more possible from year to year to use gold ores that were formerly supposed to be of little value and of a too refractory character to be economically worked. He mentions the work of a number of gold-mining companies, and points out that in one case the ore carries, in addition to gold, silver and copper, and in some instances the ore becomes of more value as a source of copper than of gold.

North Carolina building stone is finding a greater demand from outside the State, as well as within it, and quarries are increasing their production. The coal field of North Carolina, while not extensive, offers possibilities of remunerative coal mining, particularly for a local State market. There are beds of coal of good quality ranging from six inches to four feet in thickness, but with a probable workable average of twenty-two to four inches, and the most serious obstacles in mining this coal are the narrowing and pinching of the coal to thin seams, the variation in quality and the intersection of the beds by trap dykes. In conclusion Mr. Pratt says:

"While the total output of the different mines is perhaps not as large as expected, yet the past year has made considerable advance over that of the year before, and the outlook for 1901 is better than it has been for many years. There are more mining properties in shape to do good systematic and profitable work than

ever before, and there are prospects of greater activity in the gold, corundum and talc mining, and in the stone quarrying. The copper mines are in better shape than they have every been since they were opened or become large producers in 1901. Nearly all those now interested in the active mines and mineral properties of North Carolina report that the outlook for the coming year is very encouraging for an increase in all branches of mining. It is not, then, unreasonable to expect that the results at the close of 1901 will be far better than what they show at the close of 1900."

SELLERS ARE FIRM.

Confident of the Market at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., July 23.

There was nothing in the iron market the past week of any special significance. The low bottom prices were dropped and a better uniformity in market quotations prevailed. The foundry grades particularly were well maintained, as there is with certain interests a scarcity in those grades. There was probably an increased inquiry for iron, but the resulting new business was not in proportion. Some of the larger buying interests were feeling the market, but its pulse was not satisfactory, and but few trades were made. There was the usual run of small orders that has characterized the market of late, and nothing to indicate any special interest one way or the other. It was noticeable that prices were more uniform, and there was very little concession granted in prices. Sellers have confidence in market values, and as the scale of profits is at narrow margin now, they are manifesting a disposition to hold firm. Some No. 2 foundry sold in moderate and small lots at \$10.75, but the bulk of the sales was at \$10.50. There were reports of sales at \$10.25, and even at \$10, but one could not run them down for confirmation. No. 3 foundry iron sold at \$10, No. 4 foundry at \$9.50 and gray forge at \$9.25. The soft grades were in some demand at \$10.50 for No. 2 soft and \$11 for No. 1 soft, but the sales were not large. There was a noticeable inquiry for basic iron, but delivery wanted was for August and September. The price bid was \$10.50 and \$10.75. Sellers had higher views, and put the price to \$11.25, with deliveries extending into the month of December. As far as can be learned, there were no trades made on this basis.

At the steel mill repairs to the furnaces are being made, and the output is correspondingly decreased. The rail mill is progressing, but there does not seem to be any disposition to rush it to completion. At the Alabama Steel & Wire Co. business absorbs readily the output. At present the output of rods is 300,000 pounds per turn, and there is no difficulty in marketing the output. At a meeting of the stockholders of the Electric Light & Power Co. authority was granted to issue \$6,000,000 in bonds, of which \$4,000,000 will replace old bonds. Then \$1,000,000 will be devoted to betterments and extending the power of the plant, and \$1,000,000 will remain in the treasury for use as the occasion demands. This means an enlargement of the power of the plant and an extension of its sphere.

J. M. K.

The Pig-Iron Market.

Matthew Addy & Co. of Cincinnati in their weekly report say:

"Neither the strike nor the hot weather seems to have any bad effect on the pig-iron market. Considering the fact that

July is usually an absolutely dead month in the trade, it is surprising the way in which business keeps up. There has been during the week a continuance of the heavy buying that began with the first of the month. There has been a decided increase in the hurry orders, that is, orders ranging from carload up to 100 tons for quick shipment. This kind of business has been a very decided feature of late, and while its total tonnage has been large, it has been entirely eclipsed by the very much heavier tonnage placed by the large concerns for shipment over the last half of the year. The agricultural implement makers have been the leaders. They have been buying in round lots, one concern alone having placed orders in excess of 10,000 tons. All kinds of iron have been bought, including several blocks of malleable and charcoal ear-wheel metal, although the bulk of the tonnage in this market has been Southern foundry iron.

"There is still great complaint in regard to weather conditions at the furnaces. Labor is so short that in many places it is absolutely impossible to get a sufficient supply of raw materials to keep running continuously. What makes the matter worse is that the requests of consumers for faster shipments are imperative. The situation in this respect is exceedingly annoying, as for the past two or three weeks it has been impossible to get iron forward fast enough to meet the views of the buyers. Iron that was ordered for delivery in September in many cases is wanted now, and under the circumstances it is next to impossible, of course, to anticipate deliveries. The heavy buying is making prices firmer. The weak sellers who felt it necessary to fill up their order-books have apparently had the business they needed, and are in better shape to hold their prices in line with the leading interests."

To Open Ore Beds.

According to a dispatch from St. Louis, the iron-ore beds of Kentucky have attracted the attention of a Western syndicate which has been investigating the deposits of Trigg county. As a result a company has been formed, which, it is reported, has secured 60,000 acres of land in the county mentioned, and has decided to build a plant which will include two furnaces having a daily capacity of 200 tons. The syndicate is headed by John W. Harrison of St. Louis, and includes E. H. Simmons of the Simmons Hardware Co., and Isaac Morton, also of the same city. It is reported that George C. Power, land and industrial agent of the Illinois Central Railroad, who interested the St. Louis parties, has also been the means of organizing a syndicate of capitalists from Milwaukee, Wis., which has leased 6000 acres of ore lands, also in Kentucky, and expects to construct a furnace at Paducah.

Important Water-Power Development

As recently announced in the Manufacturers' Record, the Whitney Reduction Co., of which Mr. E. C. B. Hambley of Gold Hill, N. C., is president, has purchased the power of Yadkin river from Milledgeville to the celebrated Yadkin Falls. Mr. Hambley informs the Manufacturers' Record that native development of this power will be commenced in the near future, and that a total of 46,000 horse-power will be developed for local use, as well as for transmission through electrical power to the surrounding country. If developed on the scale proposed, this will be one of the largest water-power electrical developments in the country.

MARKETING BEAUMONT OIL.

Plans for Supplying Small Consumers Promptly.

[Special Cor. Manufacturers' Record.]

Beaumont, Texas, July 20.

There is a place located not far from Beaumont known as Big Hill, on which the Guffey Petroleum Co. has been boring for some time. The well is either a finished oil well or it is a duster, because it is capped, according to local reports. Gentlemen well known in this city claim it is a well of capacity equaling some of those on Spindle Top; others, again, deny that oil has been found. It is reported that the Gulf, Colorado & Santa Fe Railway Co., which has been experimenting with Beaumont oil as fuel for locomotives, has reached the conclusion that it is cheaper and better in every way than coal; that they will shortly spend \$100,000 in tanks and burners, and that they will begin at once to gradually equip their locomotives with oil-burners. This road will soon be into Beaumont, and will be able to get its oil right at the fountain-head of supply.

The greatest problem the oil producers have to face at this time is that of freight rates. The railroad commission of this State, which fixes rates, has not as yet taken any action on the subject, although it has issued a call for a hearing to be had looking to the reduction of petroleum rates in the near future. There are three or four companies that actively engage in marketing oil, and whose sales would be largely increased in this State if the rates were made equitable. These are the Lone Star & Crescent Oil Co., the Guffey Petroleum Co., the Higgins Oil & Fuel Co. and the Heywood Oil Co., the latter company just entering the market. Mr. Murphy, sales manager of the Higgins Company, stated the other day that its shipments had been almost altogether in Texas and Louisiana, only about 20 per cent. of its output going to the Northern refineries. The oil in Texas and Louisiana is principally used for fuel, of course, being consumed in large quantities by the compresses particularly.

It is announced that the Lone Star & Crescent Oil Co. will adopt a different plan for the marketing of its oil from that of the other companies. It will be on the order of the Waters-Pierce Oil Co. operations. It proposes establishing storage tanks, varying in capacity from 15,000 to 50,000 barrels, at Houston, Galveston, New Orleans, Mobile and Pensacola, at which points it will carry a large supply of the oil on hand. It is its purpose by doing this to be able to supply small consumers by delivery wagon who are not equipped for storing carload lots, or who do not use such large lots as carloads. If it is found that this plan is successful the scheme will be extended, and will take in other large cities, such as Charleston and Savannah. It is proposed to supply all these places with oil by water shipment. This company is making some shipments, but its output is not known in actual figures. The Higgins Company has shipped so far this month over 150,000 barrels.

There are no new developments on the Hill for this week. There are several of the wells on the Hogg-Swayne tracts, as they are called, being several half and quarter-acre tracts sold to different oil companies two months since by this concern, on Spindle Top Hill, which were due to come in this week, but which, owing to accidents, did not do so. The Beatty Oil Co. and the Manhattan Oil Co. both expect to complete their wells during the week coming. The view of Spindle Top Hill at this time is wonderful. Derricks have been erected so close to each other that one can jump from

one to another, and the sight can only be compared to the towering masts of a hundred sailing ships all tied together. The noise of the donkey engine, the blowing of the oil jets in the boilers, the hammering of the boilermakers engaged in erecting the huge tanks all present a scene of activity rarely equalled in the Lone Star State, if ever.

The Trans-Mississippi Congress, in meeting at Cripple Creek, enthusiastically endorsed the Beaumont ship channel up Neches river. The Beaumont contingent worked hard to secure the coveted endorsement, and after the splendid explanations and descriptions of the plan by Messrs. Bright and Shepherd the convention endorsed the project and promised to work for its accomplishment collectively and individually.

There is a disposition among some of the prominent outside oil companies to go deeper than has been the case heretofore in looking for oil. It is thought that there must be at some depth a means of ingress for the oil to get into Spindle Top Hill, and the Texas & New Orleans Oil Co., owners of the famous Kelly-Kiser, the Treadaway Oil Co. and the Chicago Crude Oil Co., all drilling on the outside territory, have practically decided to go down as deep as 3000 if not 4000 feet, if they can reach that depth.

Kentucky Oil Fields.

[Special Cor. Manufacturers' Record.]

Somerset, Ky., July 20.

Dalton well No. 1, which is located near Sunnybrook, in Wayne county, came in Friday, and in five hours flowed 250 barrels of fine amber-colored Pennsylvania grade of oil. The well is the largest struck in the field, and is the property of the Kentucky & Tennessee Oil Co. Capt. W. G. Strubbe, general manager of the company, is one of the oldest oil operators in the field. He took the Dalton lease in 1889.

Southern and Eastern Kentucky is waking up, and new enterprises are coming to the front, including the building of several railroads in this part of the State. The Burgin & Jellico road, which will pass through this county, will open up one of the richest coal fields in the South, and fine oil, timber and other mineral products.

Chicago and New York capital is rapidly being attracted to the field. Somerset is the metropolis of the Kentucky and Tennessee oil field, and a center of development in Kentucky. Pulaski county is full of rapid-flowing streams suitable for water-power that will be soon used for manufacturing purposes.

A dispatch from Beaumont, Texas, states that oil producers in that vicinity have decided to have two steamships built to carry oil in bulk to domestic and foreign ports, and that a contract has been given the Neafie & Levy Shipbuilding Co. of Philadelphia. In a letter to the Manufacturers' Record Mr. Sommers N. Smith, vice-president of the company, informs the Manufacturers' Record that negotiations are in progress with this end in view, but no contracts have been let as yet. The vessels it is proposed to build are to have a carrying capacity of 800,000 gallons each. The company, it is announced, has already secured one steamship, being built by the New York Shipbuilding Co. of Camden, N. J., for this service.

The increase of cornmeal exports from Newport News is very noticeable. During one week recently 14,000 barrels were shipped to various foreign ports. The average weekly shipments have aggregated 10,000 barrels.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

INDUSTRIES IN GERMANY.

Consul Diederich's Review of Conditions in the Empire.

In a report to the State Department, United States Consul Henry W. Diederich at Bremen draws rather a gloomy picture of industrial conditions in Germany. He writes:

"The spring failed to infuse new life into German industry, which has been very sluggish during the last six months. Now that the military operations in the Far East have ceased and the outlook for peace everywhere has become brighter, it is hoped that business will soon improve. Mr. Ballin, the general manager of the Hamburg-American Line, who has just returned from a trip around the world, is endeavoring to arouse hope for the increase of German trade by calling attention to the new markets to be opened in China, especially in the vast and important valley of the Yangtze Kiang. However, the more conservative do not place much confidence in these prognostications. It is pretty generally acknowledged that the present industrial crisis was caused mainly by overproduction in Germany and in other manufacturing countries. Industrial pursuits, as is well known, are dependent one upon the other, and if there is a check in one branch, it is felt elsewhere. Thus, when the textile mills for spinning cotton and woolen yarns are run on short time, but little machinery for such mills will be in demand; when no machinery is built, the iron works shut down, and when no iron is ordered, the coal mines are idle. As soon as one part of the industrial body becomes diseased, the entire system must suffer."

"Much is hoped from the commercial treaties now under discussion. I find that, generally speaking, those interested in trade and manufacture in Germany are in favor of long-time commercial treaties, arguing that these would be the best means of removing from the markets of the world the risks brought on by instability and constant changes. In this connection it is generally stated that the increase of German commerce by about \$1,000,000,000 during the past ten years was brought about chiefly through the long-time commercial treaties with other nations."

"The coal industry in Germany hoped early in the season to derive great advantages from the export duty which the English government put on its coal. It was expected that this measure would bring on many strikes, thus vastly reducing the output of English coal and increasing the demand for the German article. But these expectations failed to be realized. There is but little demand for coal at present, and the stocks in the coalyards are increasing to an alarming degree. The syndicate has succeeded in keeping up prices fairly well, but it is believed this cannot last much longer. In the iron industry the difficulties in the main have grown, rather than decreased. It is true some large orders have been placed, and much activity has been shown in certain quarters in order to deliver on time, but such orders were few, and they had been kept back to the last moment, because everybody knew that they could be filled at once; and by waiting to the last moment there was always a chance of cutting prices. The same condition prevails with the manufac-

ters of machinery, many of whom have been obliged to discharge their men, while others have had to reduce the time of running their works."

"Unusually gloomy has been the condition of affairs in the textile branch of German industry for the past twelve months. In a convention of iron men recently held it was ascertained that in sixty-five mills in Southern Germany, with 37,142 looms, not less than 6183 looms were idle. It was at once resolved to reduce the output and to induce other districts devoted to spinning and weaving to do the same thing. This has been done, but in spite of all efforts the general situation has not improved. The prices for manufactured goods are dropping, and orders are very slow in coming, because everyone feels that he may look for still lower prices. This situation prevails in all branches of the textile industry, including the knitting mills. In some manufacturing towns of Saxony, which had been kept very busy for the past ten years, one-fourth of the looms and other machinery are now idle. In some of the factories for lace curtains the men work on half-time only, and must be content with wages of 8 to 10 marks (\$1.90 to \$2.38) per week. Even the lace-trimming district in the Erzgebirge is suffering more than it has for years."

"The great German industry in chemicals, which for years was exceedingly prosperous, is now beginning to complain of lack of orders and poor prices. The same is true of the large electrical enterprises, which considered themselves beyond the reach of hard times. With the advent of spring it had been expected that, as is usual at this time of the year, a great impetus would be given to building, but these hopes have also been doomed to disappointment, and thousands of foreign mechanics and laborers, who annually flock to this country at this season, have been compelled to return to their homes. The factories of cement, too, in spite of their abundant capital, have encountered many difficulties, and the failure of the Reichstag to pass the canal bills has not brightened their prospects. The manufacturers of glassware and furniture in various districts find it extremely difficult to employ help, even with wages and time much reduced. In consequence of this condition in almost every branch of German industry many laboring men, especially those with families, barely succeed in keeping body and soul together, while the monthly reports as to the number of men who are idle and seeking employment are alarming. In addition to all this, Germany must be prepared to harvest the poorest crops it has had in many a year. Altogether, the business situation in Germany is beginning to be very much as it was with us from 1893 to 1897. It is to be hoped that these conditions have already reached their climax. Should they continue much longer, however, it is to be feared that the falling prices, reduced wages and accumulations of stock will seriously affect our trade with this country."

LATIN-AMERICAN TRADE.

Our Exports in That Direction Not Equal to Opportunities.

Exports from the United States to all American countries and islands south of her boundaries show a marked increase in the fiscal year just ended, and exceed those of any other year in the history of our commerce. This statement, announced by the Treasury bureau of statistics, is especially interesting in view of the various efforts being made for closer business, commercial and transportation relations between the United States and

her neighbors at the south. New lines of steamers have recently been put on between the Pacific coast of the United States and the western coast of Mexico, Central and South America; a recently-published statement indicates that great financial interests of the United States have obtained control of the nearly completed transcontinental line connecting Argentina with Chili; the establishment of additional direct steamship lines between the eastern coast of the United States and South American ports is under discussion, and the opening of an isthmian canal would give a straight line of water communication from the eastern coast of the United States to the western coast of South America. All of these movements in the direction of closer relations between the United States and her neighbors at the south add interest to the announcement that our exports to those countries in 1901 are larger than those of any preceding year, and to some figures just presented by the bureau of statistics showing the imports of each of the South Atlantic States in 1899 and the exports of the United States to each of those countries in 1901.

The growth of exports from the United States to Central and South America has not kept pace in the past with the growth in other directions. The total exports to South America in 1900, for instance, were no more than those of 1890, being in each of those years, in round numbers, \$38,000,000, while the same statement holds good with reference to Central America, the total exports from the United States to the Central American States being in 1890 and 1900 in each case, in round numbers, \$5,000,000. It is to Mexico and the West Indies that our exports in the decade 1890-1900 show the greatest increase, being to the West Indies in 1890 \$33,000,000 and in 1900 \$47,000,000, and to Mexico in 1890 \$13,000,000 and in 1900 \$34,000,000. The fiscal years 1900 and 1901 show a much greater increase in our sales to our neighbors at the south than in any preceding years. The total exports to Mexico, Central and South America and the West Indies in 1899 were \$103,000,000, in 1900 \$127,000,000, and in 1901 \$138,000,000 in round numbers. Thus the figures of 1901 are \$35,000,000 greater than those of 1899, while the 1899 figures are only \$1,000,000 greater than those of 1893.

The importance of satisfactory transportation facilities is illustrated by a study of the growth of our export trade with the countries at the south. Prior to the construction of railway lines connecting Mexico with the United States our exports to Mexico seldom reached \$10,000,000; by 1896 they were \$20,000,000; by 1899, \$25,000,000; in 1900, \$34,000,000, and in 1901, \$37,000,000 in round numbers. To the West Indies the transportation system is much more satisfactory than to the South American countries, and to those islands our exports have grown from \$34,000,000 in 1891 to \$49,000,000 in 1901. To Central and South America, with which steamship communication has not yet been satisfactory, the growth has been less, the figures, as already indicated, being in 1900 practically the same as in 1890, while the figures for 1900 and 1901 show in each case a considerable increase. This increase is especially notable in the exports to the countries on the western coast of South America reached by the recently-established lines connecting the western coast of the United States with that of South and Central America, and which were put into operation about the beginning of the present calendar year. The figures of our exports to South America show an increase of nearly 100 per cent. to Peru

in eleven months ending with May, 1901, as compared with the same period of the fiscal year 1900, and nearly 100 per cent. to Chili in the same time. Of the increase of \$6,000,000 in exports to South America in 1901 as compared with 1900, more than two-thirds is to the countries on the western coast.

The following table shows the imports of the South American countries at the latest date obtainable (in most cases 1899), and the exports from the United States to each of those countries in 1899 and 1901:

Counties.	1899.	1899.	Exports from U. S.
Argentina...	\$117,000,000	\$9,563,510	\$11,460,000
Bolivia.....	12,000,000	31,298	150,000
Brazil.....	105,000,000	12,239,036	12,190,000
C. America...	25,000,000	4,987,854	7,020,000
Chile.....	20,000,000	2,107,124	5,610,000
Colombia....	11,000,000	3,042,094	3,948,000
Ecuador....	7,000,000	882,591	2,082,000
Guiana....	10,000,000	2,363,392	2,530,000
Paraguay....	2,000,000	10,751	15,000
Peru.....	11,000,000	1,325,650	3,168,000
Uruguay....	25,000,000	1,242,822	1,626,000
Venezuela...	9,000,000	2,851,634	3,302,000
Total.....	\$354,000,000	\$40,647,756	\$52,201,000

*June, 1901, estimated.

The following table shows our total exports to American territory south of the United States in 1899, 1900 and 1901:

Counties.	1890.	1900.	*1901.
S. America.	\$38,752,648	\$38,945,373	\$45,181,000
C. America.	5,296,478	5,926,579	7,020,000
W. Indies...	33,197,222	47,436,677	49,102,000
Mexico.....	13,285,287	34,974,961	37,000,000
Total.....	\$90,531,635	\$127,283,590	\$138,301,000

*June, 1901, estimated.

It is expected that about 2,000,000 bushels of grain will be exported from Baltimore within the next thirty days. Eighteen steamships have been chartered to load cargoes within this period.

RAME OF LOUISIANA.

Ramie fiber is displayed in the Louisiana State pavilion in the Agricultural Building at the Pan-American Exposition. Ramie was first introduced into the United States in 1855 from Japan. It will grow in any soil where the winters are not too severe. A temperature of 32 degrees, however, will kill it. The yield is from fifteen to twenty tons to the acre. The fiber is made from the inner bark, which is cut in strips four feet in length. Samuel B. Allison of Galveston, Texas, invented and built the only machine for separating the inner from the outer bark. This machine was taken to Galveston by Mr. Allison and was destroyed, with its inventor, during the disastrous storm of last fall, with all data regarding the specifications of the invention. The outer bark is of a resinous nature, and in Japan is separated from the inner bark by hand, each stalk being handled separately and the two layers of bark separated with a knife. All the fiber now used in this country is procured from Japan, Louisiana having no machinery to produce the fiber, and labor being too expensive to compete with the cheap Japanese labor. Ramie can be made into cloths of various textures, and will take any dye. It has a silky appearance, and when interwoven with silk it is next to impossible to discover the ramie fiber. The sails of the Shamrock and Constitution and nearly all the racing yachts are made from ramie fiber. Ramie is the strongest and longest vegetable fiber known. A very superior grade of plush is made from it. The reed grows profusely throughout Louisiana without any cultivation whatever. It grows to the height of from four to eight feet, four-foot reeds being the most desirable for use. It is of rapid growth, sometimes producing as many as five crops a year. The Louisiana commissioners say that State produces enough ramie to supply the United States, and are anxious to interest capital in the production of it. The ramie-fiber exhibit at the exposition is a fine one, and attracts much attention.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Kansas City, Mexico & Orient.

Progress on the line of the Kansas City, Mexico & Orient Railroad is reported as follows by Mr. A. E. Stilwell, president of the company, who was recently interviewed in Boston on the subject:

"We have completed the survey of our entire line, 1600 miles, in thirteen months; we have 200 miles of road graded, or one-eighth of the entire length of the system, and we have over 600 miles of right of way secured, most of which we have had to purchase. In addition to this physical progress, we have raised 40 per cent. of the financial needs of the company.

"We expect to complete our road from Kansas City to the Pacific in two and one-half years. We are employing 4000 men in its construction, of which about 3000 are employed in Mexico. The road is being built by three construction companies, one of which has a capital of \$7,000,000 and two of \$1,000,000 each. We get \$7000 per kilometer from the Mexican government for the work not in the mountain regions, and get a lump sum of \$3,000,000 for the construction of the mountain division of 250 kilometers, which is equal to \$12,000 per kilometer. In addition we get concessions from the States of Sonora and Chihuahua equal to \$3000 per kilometer, and other State aid, which will amount to about \$3,000,000.

"We believe that our line will open up an empire to American trade. It will shorten the distance between this country and South and Central America 1700 miles, as Fort Stilwell, our Pacific-coast port, is nearer South America by 1200 miles than San Francisco, and there is an additional saving on the land haul of 500 miles. This road should open up an enormous market to mining machinery, etc. The export trade of the west coast of Mexico now amounts to about \$11,000,000 per annum and the import to the extent of \$4,000,000. J. T. Odell, formerly of the Northern Pacific, Baltimore & Ohio and New England roads, will be one of the vice-presidents or general manager of the Kansas City, Mexico & Orient, and will have full charge of all operating employees."

New Lines in the Virginias.

The activity in railroad promotion and construction in Western Virginia and Eastern West Virginia is very noticeable. Projects which will be completed within the next few months include the Greenbrier division of the Chesapeake & Ohio system, extending between Whitecomb and Ronceverte, a distance of ninety-six miles. At the northern terminus of the road connection may be made with the Coal & Iron Railroad being constructed between Elkins and Durbin, a distance of forty-three miles. The Manufacturers' Record is informed on good authority that the West Virginia Central & Pittsburgh Railway Co., which is building the Coal & Iron Railroad, has under consideration an extension as far as Harrisonburg, Va., and that surveys are now in progress. If built, the extension would connect with the Coal & Iron division at Durbin. The route is nearly a straight line. In the same section of Virginia the Chesapeake & Western Railroad Co. is completing an extension of fourteen miles from Bridgewater west. Surveys are being made for additional mileage beyond this point with the view of terminating the road in the vicinity of Frost, W. Va., where it will reach extensive coal deposits. The

Chesapeake & Western road, it is understood, is principally owned by De Witt Smith of New York, who was the original promoter of the railroad between Richmond, Va., and the North Carolina State line, now used as the northern extension of the Seaboard Air Line.

It is reported that owners of the Chesapeake & Western have purchased and control over 200,000 acres of timber lands covering an extent of territory beginning at North River Gap, Va., and reaching into West Virginia. At North River Gap they are erecting a large modern saw-mill and lumber plant that will cut over 150,000 feet daily of hardwoods.

Electric Lines in Kentucky.

An important electric system in Kentucky will be completed when the plans for the Georgetown & Lexington Traction Co. and the Bluegrass Traction Co. are carried out. The companies represent a syndicate which proposes building an electric line between Georgetown and Lexington, Ky., also between Lexington and Paris. It has been decided to construct the Georgetown-Lexington line immediately, and \$250,000 in bonds will be issued to finance the project. The company has arranged to build a powerhouse at Georgetown, and is ready to let contracts for the work and equipment. As soon as completed the Lexington-Paris line will be built, as franchises and rights of way have been secured. One of the principal promoters of the enterprise is Mr. Younger Alexander, cashier of the Bracken County Bank of Brooksville, Ky. Mr. Alexander is also interested in steam railroads in the State.

Kentucky Electric System.

A dispatch from Louisville, Ky., is to the effect that the Louisville, Anchorage & Pewee Valley Electric Railway Co. has made arrangements to float an issue of \$18,000,000 in 5 per cent. bonds to complete its electric-railway system. It was announced some time ago that a network of electric lines were planned in the State, of which Louisville would be the center. The company in question proposes building through portions of fourteen counties, and will include the towns of Shelbyville, Eminence, Frankfort, Lebanon, Danville and Harrodsburg. The total length of the system will be over 100 miles.

Arkansas & Choctaw Extension.

Arrangements are being made to extend the Arkansas & Choctaw Railway further into the Southwest, according to a letter from Mr. F. W. Valliant, chief engineer of the company. The road is at present in operation between Ashdown, Ark., and Arkinda, a distance of twenty-five miles. Mr. Valliant writes that the extension will terminate at Wichita Falls, Texas, where connection will be made with several other systems. Plans have been arranged to let contracts within the next thirty days. There is also a possibility that an extension east to Ashdown may be decided upon in the near future.

To Reach the Coal Fields.

A dispatch from Marion, N. C., announces the formation of the Marion & Northwestern Railroad Co. to build between Marion and a point in the East Tennessee coal fields. W. C. Perkins of Boston is the president and principal promoter of the company. Others interested are John W. Greenlaw of Boston, as well as J. S. Manning and L. D. Heart of Durham, N. C. At Marion connection will be made with the Southern system, also with the South Carolina & Georgia Extension Railroad.

To Equip Its Locomotives.

A dispatch from Galveston, Texas, states that the Gulf, Colorado & Santa Fe Railroad Co. has determined to appropriate \$100,000 to equip its locomotives with apparatus for burning oil. It is stated that fifteen are to be altered immediately at the shops at Cleburne. Superintendent W. C. Nixon is quoted as saying that the shops at Cleburne will also use oil as fuel, and that contracts have been let for eleven steel tanks, which will have a capacity for 37,000 barrels each, to be located at convenient stations on the line.

Property for Terminals.

In a recent issue the Manufacturers' Record announced that a sale of property on the James river a few miles from Newport News had been made, it was reported, for railroad terminals. A dispatch from Newport News states that representatives of the Gould syndicate have purchased the property, and that a railroad will be built from Richmond to it. According to the dispatch, an arrangement may be made with the Chesapeake & Ohio system by which the Goulds will use this line to reach Richmond.

Pleased With the Port.

Officials of a number of Mexican railroads have recently been in New Orleans investigating the shipping facilities of the port. The party included the general freight and passenger agent of the Mexican Railway, the general freight agent of the Interoceanic Railway and the United States representative of the Mexican Railway Co. The conclusion reached by the visitors favors New Orleans as being the natural tidewater outlet for all export business west of Pittsburgh.

More Mileage in Arkansas.

The report recently published in the Manufacturers' Record that the Southern Missouri & Arkansas Railroad Co. is considering a further extension in Arkansas is confirmed by Mr. Newman Erb, president of the company, who writes that surveys are now being made to Pocahontas, an estimated distance of fifty-two miles, and that it is expected to let contracts within the next thirty days.

Another Mississippi Project.

A dispatch from Vicksburg, Miss., states that a company of well-known business men of Vicksburg have become interested in the plan to build a road between Vicksburg and Hattiesburg, an estimated distance of 110 miles, and have organized the Vicksburg & Southeastern Railroad Co. for this purpose. W. L. Wells and W. H. Fitzhugh are among those interested.

To Bridge the Mississippi.

In a letter to the Manufacturers' Record Hon. M. M. Stephens, mayor of East St. Louis, Ill., writes that a company has been organized to build a third bridge across the Mississippi river connecting East St. Louis and St. Louis, and that it is expected to complete the bridge and approaches within the next two years.

Railroad Notes.

According to a dispatch from Huntsville, Ala., a Baltimore syndicate, which includes Messrs. Hambleton & Co., are negotiating for the purchase of the street railway in Huntsville and suburbs. The road is about four miles in length, but it is understood that several extensions are contemplated by the present owners.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

RUSSIA'S TEXTILE INDUSTRY.

Its Output Going in Increasing Quantity to Asia.

The Russian ministry of finance has just published an interesting report furnishing statistics concerning the cotton industry of Russia, from which it appears that the quantity of cotton worked by Russian mills in 1899 was 577,792,000 pounds, 180,560,000 pounds Russian and 397,232,000 pounds foreign, valued at \$76,220,000. The works employed over 6,000,000 spindles, 146,000 weaving looms, 100 spinning mills and 118 weaving works, producing 505,568,000 pounds of yarn, valued at \$127,720,000, and 397,232,000 pounds of coarse stuff, worth \$124,630,000. These mills furnished employment for 170,000 workmen, and 150,000 were engaged in the weaving works. The amount of capital invested is \$137,505,000.

The average number of spindles in each factory is 56,000, and about 102 pounds per spindle are used. The Russian working day is a long one. Taking the number of working days in the year as 285, the average number of working hours of one spindle was, in 1899, 4503 per year, or 15.8 per day.

Consul-General W. R. Holloway at St. Petersburg, who reports these statistics, adds:

"The average number of yarn manufactured in Russia equals 27; Nos. 30 and 34 of warp and 34 to 38 of woof, necessary for the fabrication of coarse calico, are in greatest demand. Although the manufacture of the higher numbers of yarns has made considerable progress in recent years, greater development is retarded by the high price of the weaving machines, which are almost exclusively imported. There is a gradual annual increase in the number of looms, and while the law of 1897 decreased the number of hours each loom should be run, their productive capacity increases. The development of the Russian weaving and dyeing production is sufficient to satisfy not only the national demand, but also that of the East. The Asiatic import of Russian cotton tissues increases yearly."

Regarding the growing of cotton in Russia a correspondent of the Cotton Gazette of Liverpool writes:

"It is true there has been an enormous increase in the producing capacity of the Russian cotton culture during the last few years, and there is no room for doubt but that the efforts to enlarge the area under cultivation will continue as strenuously as ever; but on the other hand (leaving aside the present period of stagnation), the consuming capacity of Russian mills is also growing rapidly. At present this country is not able to supply her own wants of the raw material, and must meanwhile continue to fill the gap buying American cotton. As time goes on she will naturally make herself more and more independent of the American cotton markets. The Russian cotton crop of 1899 amounted to 5,029,300 pounds, equals 363,367 bales of 500 pounds, and 1900 to 7,121,700 pounds, equals 514,543 bales of 500 pounds. Given normal weather conditions, this year's crop is

likely to be 9,000,000 to 10,000,000 pounds, equals 650,000 to 725,000 bales—that is, 135,000 to 200,000 bales more than last year, and the quantity of American imports correspondingly less, but this decrease will partly be set off by the increase in the number of spindles lately put in."

Cotton in the British Empire.

At a meeting of the Oldham (England) Chamber of Commerce during a recent discussion of the growth of cotton-raising in the British empire, it was reported that the cultivation of cotton could not be extended much beyond its present limits in Egypt. There were 6,000,000 acres of land under cultivation in the Nile delta, and from Cairo to the Mediterranean the whole was cultivated except the salt lakes. The only way of extending the cultivation of cotton in lower Egypt was by the seaboard by filling up the salt lakes, and that would take a number of years to produce any appreciable result. As to the Nile valley proper, it was only very narrow on either side, and cultivated practically to its fullest extent. As to the importation of American seed, it was said no good results had been produced by that method. The soil and climate were suitable for the long-staple cotton, and when they could grow a better class and get a better price they would not grow from American seed. At the Cape further inquiries were being made.

In Natal cotton grew luxuriantly, but labor was unreliable. In Queensland the cultivation of cotton was gradually dying out. Probably when American cotton was so cheap they found they could not grow it profitably. In New South Wales further inquiries were being made.

In South Australia considerable interest was being taken in the question, and with regard to New Zealand and Western Australia, the climate was not suitable. As to West Africa, Messrs. Elder, Dempster & Co. were making experiments at Lagos, Liberia, and the west coast generally in the growth of cotton from American seed, of which 150 tons had been imported, along with expert growers from the States, to show the natives how to cultivate the cotton. These experiments were exciting a good deal of interest in America, and Mr. Boyle, the American consul at Liverpool, had reported on the experiment. From experiments which had been made in other parts of the world, seed which had been imported from another country did not seem to be successful. They had been trying it in India from Egyptian seed, but the experiments were not successful, and had been abandoned. The experiments were entirely unsuccessful.

Woolen Mills and Clothing Factory

Several months ago announcement was made of the intention of the Mayfield (Ky.) Woolen Mills, with plants at Mayfield and Louisville, Ky., to remove to St. Louis, there to consolidate with the wholesale establishment that had been in existence for some years. Several weeks ago the Mayfield Woolen Mills

Clothing Co. of St. Louis, Mo., was reported as incorporated to carry out these plans. Arrangements are now being made for active commencement of work on the buildings that will be required. Site has been bought in St. Louis, and a structure 376 feet square, eight stories high, of slow-burning construction, electrically equipped, will be erected. Plans and specifications are now being prepared. The combined mills will make a 20-set plant, and its product will be manufactured into clothing for children and adults. The daily capacity will be 5900 garments, and about 2000 employees will

be necessary for full operation. Officers have been elected as follows: President, A. H. Duncan; secretary-treasurer and general manager, J. D. Simpson; second vice-president, G. O. Duncan, and superintendent, A. B. Hudspeth. The capital stock is \$1,200,000.

Travora Manufacturing Co.

The Travora Manufacturing Co. has been incorporated, with capital stock of \$100,000, to own and operate the 2500-spindle cotton mill reported last week as to be built at Graham, N. C., by Messrs. J. H. White & Bro. Messrs. J. Harvey White, Edwin White and M. H. White and Mrs. Emma White are the incorporators. As previously announced, the mill will have 2500 spindles, to which looms will be added later; the building will cost \$12,000, and the machinery equipment \$40,000. Work of construction will be commenced at once. The product will be coarse yarns until the looms are purchased.

To Double 5000-Spindle Mill.

Another Southern mill will be doubled this year. It is the Rushton Cotton Mills of Griffin, Ga., that was completed some months ago at a cost of about \$100,000. This plant has been operating 5000 ring spindles, sixty narrow and sixty broad looms in the manufacture of brown sheetings. Arrangements for erecting the necessary additional buildings and for buying the machinery are expected to be made in the near future, and the improvements will represent an additional capitalization of probably \$100,000.

Textile Notes.

Messrs. J. H. Miller, J. A. Davenport, J. G. Williams and W. C. Raso have incorporated the Cross Hill (S. C.) Mill Co. with capital stock of \$15,000.

The organization of a co-operative company to build a cotton factory is proposed at Tuscaloosa, Ala. Probably Wm. G. Cochrane can give information.

Elizabeth Cotton Mills of Atlanta, Ga., states that there is no truth in the report, mentioned last week, that it will install looms and manufacture brown sheetings.

Birmingham (Ala.) Hosiery Mills, lately reported incorporated by Louis Minor, J. H. Fowle and J. A. Yates, have let contract for erection of building for their plant.

The Wiscasset Mills Co. of Albemarle, N. C., has declared a semi-annual dividend of 4 per cent.; Windemere Knitting Mills, also of Albemarle, N. C., declared semi-annual dividend of 3 per cent.

Easley (S. C.) Cotton Mills, mentioned last week as to increase capital stock from \$200,000 to \$250,000, states that its additional capital will not be followed by any increase in the mill plant at present.

The Gibson Manufacturing Co. of Concord, N. C., has completed its plant for the manufacture of wide blankets, and is about to start operations. The equipment includes 10,000 spindles and 200 looms, and is capitalized at \$250,000.

Archibald Henderson has bought the Anniston Bag Mill at Anniston, Ala., which he has been operating for some months. The previous owner was John W. Noble. Mr. Henderson will increase the capacity of the mill; it now employs thirty hands.

Newman (Ga.) Cotton Mills has about completed and is to put in operation its No. 2 mill of 10,000 ring spindles for manufacturing Nos. 26 to 50 ply yarns. The No. 1 mill has 9560 ring spindles running on yarns, twines, etc. About \$150,000 has been invested in the second mill.

Norris Cotton Mills Co. of Camden, S. C., has completed its addition, recently under construction, and now has 13,500 spindles and 650 looms in position. This is an increase of 6828 spindles and 208 looms, requiring an expenditure of probably \$100,000.

The Sylvan Mills of Shelbyville, Tenn., will be sold at public outcry on August 10, this action being taken because of failure of the company to pay coupons on bonds falling due July 1. This plant has 3600 spindles and 104 looms. Edmund Cooper, trustee, can give information to inquirers.

A new plant recently completed is the Elizabeth City (N. C.) Knitting Mills, and officers for the ensuing year have just been elected. They are P. H. Williams, president, and R. B. Martin, secretary-treasurer. The company is capitalized at \$25,000, and it is said intends to install 3000 spindles for making its own yarns.

The Orr Cotton Mills of Anderson, S. C., will fill its building with machinery, this requiring 1500 more ring spindles and 100 looms, together with the necessary preparatory machinery. This is one of the new plants. Its completed equipment will be 23,030 ring spindles and 700 looms, 100 of them being narrow and the others broad.

A company is being organized at Marshall, N. C., for the erection of a cotton factory to be operated by water-power, and a Mr. Pritchard is interested. The North Carolina Water & Electric Power Co. will furnish the power, and is now building plant for same. It is said this company will own controlling interest in the mill company.

Still another cotton mill, the ninth, is projected for erection at Huntsville, Ala. Outside capitalists were in the city during the week investigating regarding a suitable site for the enterprise. Messrs. W. I. Wellman, James A. Ward and Jas. R. Boyd represented the city's business men in explaining Huntsville's advantages to the visitors.

The Broadus Cotton Mills of Stevenson, Ala., reported organized recently, has elected directors as follows: Messrs. C. T. Bogart, J. W. Ashcraft, J. L. Armstrong, W. J. Tally, P. B. Timberlake, S. S. Broadus, H. D. Latimer, H. C. Ray and J. F. Washington. The capital stock of \$50,000 has been subscribed, Eastern parties being interested.

Major F. von Schrader, U. S. A., Army Building on Whitehall street, New York, will open bids August 12 for furnishing 1,000,000 yards of khaki material, subject to 100 per cent. increase, conforming to standard and specifications. Blank forms and other information can be obtained at offices of quartermasters in New York, Philadelphia, Chicago and Boston.

The semi-annual meeting of the directors of the Sanford (N. C.) Cotton Mills was held during the week, and it was decided to issue \$40,000 worth of 5 per cent. bonds to pay for the additional machinery. This machinery was mentioned last week as having been installed, increasing the plant's complement of spindles to 9000 and the looms to 256. It is reported another hundred looms have been ordered.

The Mountain Island (N. C.) Cotton Mills will be sold at public auction on September 11 at the courthouse in Dallas, N. C. This property has been operated by the Catawba Electric Power Co., running 6200 ring spindles and 142 looms, capitalized at \$250,000. Information can be obtained from the Fidelity & Deposit Co. of Baltimore, Md., trustee, or from Burwell, Walker & Cansler, attorneys, Charlotte, N. C.

A meeting has been called of the stockholders of the Loray Mills to be held at Gastonia, N. C., on August 16 to act upon a resolution to dissolve the present corporation and form a new company, with more liberal charter rights. The Loray Mills is now building a mill for 50,244 ring spindles and 1580 narrow looms; it is capitalized at \$1,000,000.

A suitable location in the South for a spinning and weaving plant is now being sought by a Northern manufacturer. It is the intention to build at some advantageous point where the citizens will assist the enterprise by taking part in the organization of a company and the placing of bonds or stock for erecting the necessary buildings. Complete particulars can be obtained by addressing "Philadelphia," care of the Manufacturers' Record.

Barton Myers has been appointed receiver of the Powhatan Manufacturing Co. of Norfolk, Va., manufacturer of knit goods. The receiver will proceed to manufacture the stock now on hand, and endeavors will be made to reorganize the company when that stock is exhausted. The company was incorporated at \$46,700. The plant is owned by the Lambert's Point Knitting Mills, and is leased to the Powhatan organization.

Messrs. Nicholas W. Steele, Chas. T. Westcott and others of Baltimore, Md., have purchased abandoned flour-mill property on the Frederick road near Baltimore, and will utilize same for establishing a woolen mill. Two new buildings will be erected, respectively 58x108 feet and 70x108 feet in size. Water-power will be used. The necessary machinery has been contracted for. Mr. Steele was reported some months ago as forming an enterprise similar to this, but owing to unforeseen circumstances the project was postponed until now.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago,
July 23.

No. 10s-1 and 12s-1 warps.....	13 $\frac{1}{2}$ ¢
No. 14s-1 warps.....	13 $\frac{1}{2}$ ¢
No. 16s-1 warps.....	14 $\frac{1}{2}$ ¢
No. 20s-1 warps.....	15 @
No. 22s-1 warps.....	15 @
No. 26s-1 warps.....	15 $\frac{1}{2}$ ¢
No. 6s to 10s bunch yarn.....	12 $\frac{1}{2}$ ¢
No. 12s-1.....	13 @
No. 14s-1.....	13 $\frac{1}{2}$ ¢
No. 16s-1.....	14 @
No. 20s-1.....	15 @
No. 22s-1.....	15 $\frac{1}{2}$ ¢
No. 26s-1.....	15 $\frac{1}{2}$ ¢
No. 3s-2 ply soft yarn.....	13 $\frac{1}{2}$ ¢
No. 10s-2 ply soft yarn.....	14 @
No. 8s-2 ply hard.....	13 @
No. 8s-2 ply hard.....	13 @
No. 10s-2 ply hard.....	13 $\frac{1}{2}$ ¢
No. 12s-2 ply hard.....	13 $\frac{1}{2}$ ¢
No. 14s-2 ply.....	14 @
No. 16s-2 ply.....	14 $\frac{1}{2}$ ¢
No. 20s-2 ply.....	15 @
No. 24s-2 ply.....	15 $\frac{1}{2}$ ¢
No. 26s-2 ply.....	16 @
No. 30s-2 ply yarn.....	16 $\frac{1}{2}$ ¢
No. 40s-2 ply.....	22 $\frac{1}{2}$ ¢
No. 8s-3, 4 and 5 ply.....	13 @
No. 20s-2 ply chain warps.....	15 $\frac{1}{2}$ ¢
No. 24s-2 ply chain warps.....	16 $\frac{1}{2}$ ¢
No. 26s-2 ply chain warps.....	17 @
No. 30s-2 ply chain warps.....	17 $\frac{1}{2}$ ¢
No. 16s-3 ply hard twist.....	14 $\frac{1}{2}$ ¢
No. 20s-3 ply hard twist.....	15 @
No. 26s-3 ply hard twist.....	16 @

Market firm; fair demand.

Cottonseed-Oil Notes.

The Royster Guano Co. of Norfolk, Va., is considering the advisability of building an oil mill to furnish the company with cottonseed meal at both its Columbia (S. C.) and Tarboro (N. C.) works.

It is stated that the Farmers & Ginners' Cotton Oil Co. of Sulphur Springs, Texas, has been incorporated, with a capital stock of \$30,000. The incorporators are W. F. Skillman, J. N. Ponder and O. M. Pate.

The cottonseed-oil men of Memphis, Tenn., at a meeting last week resolved to make the rules of the Memphis Merchants' Exchange governing the sale or transactions of cottonseed and its products conform to the rules and regulations adopted by the National Cottonseed Crushers' Association.

The Wharton Oil & Cotton Co. of Wharton, Texas, has been incorporated, with a capital stock of \$84,000. The company will build and operate cotton-oil mills, cotton gins, etc. The incorporators are R. H. D. Sorrel, H. J. Bolton and R. L. Hefflin.

The capacity of the cottonseed-hulling plant, established in Austin, Texas, last season by Simon Geisman and associates, has been enlarged to 100 tons daily. This concern is said to be the only one of its kind in the world. The kernels are shipped to France, where they are manufactured into a high-grade oil.

It is reported that the Dublin Oil Mill & Ice Co. of Dublin, Ga., has been purchased by the Virginia-Carolina Chemical Co. The price paid is approximated at \$65,000. The understanding is that the Virginia-Carolina Chemical Co. will erect a fertilizer plant at Dublin to be operated in connection with the oil mill.

Mr. C. Fitzsimmons, who has managed some of the oil mills at Columbia, S. C., has been appointed Southern superintendent of the Southern Cotton Oil Co., with headquarters at Atlanta, Ga. Mr. A. C. Phelps, formerly secretary and treasurer of the Atlantic Cotton Oil Co. at Sumter, S. C., has been appointed division superintendent of the Southern Cotton Oil Co., with headquarters at Columbia, S. C.

The market for cottonseed products in Texas continues quiet, and mills are not disposed to make future contracts for new oil until the status of the new cotton crop can be ascertained. Prices are nominally steady, with prime crude oil, loose, quoted at 24½ to 25 cents, and prime summer yellow oil, 28 to 29 cents, all f. o. b. mill at interior points in the State; hulls, baled, \$5 per ton; cottonseed cake, \$19.75 to \$20.50, and cottonseed meal, \$20 to \$21 per ton delivered at Galveston.

The following are official quotations on cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 22d inst.: Prime refined oil in barrels, 37 to 38 cents per gallon; off refined oil in barrels, 36 cents per gallon; prime crude oil, loose, nominal per gallon; prime cottonseed cake, \$23.50 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$22.50 to \$23 per ton of 2240 pounds; off do., nominal; soap stock, loose, 1 cent per pound; linters, per pound, choice, 35½ cents; A, 3½ cents; B, 3½ cents; C, 3 cents; cottonseed in sacks delivered in New Orleans, \$12 per ton of 2000 pounds; in bulk delivered in New Orleans, \$11 per ton of 2000 pounds.

To Make Paper from Bagasse.

Another instance of the utilization of a Southern waste product in the manufacture of a marketable article is seen in the contract just placed with Beloit (Wis.) machinery-makers by the United Railway & Trading Co. of New Orleans. This company refines sugar in large quantities, and the machinery ordered will enable it to manufacture a coarse grade of wrapping-paper from the bagasse or waste remaining after the sugar juice has been secured. A new process makes the pulp. The paper plant will cost about \$75,000 and have a daily capacity of twenty tons. Experiments now being made are expected to improve the grade of the paper to an equality with the best manilla.

The total assessed value for 1901 of all property owned by railroads in Virginia is \$58,895,363.38, and the total tax on it is \$264,594.42.

During the fiscal year ended June 30 66,235,000 cigars were shipped from Tampa, an increase of 13,000,000 over the preceding year.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,

Baltimore, Md., July 24.

The week under review has developed no new features in the local lumber market, and all indications seem favorable for a fair volume of business during the month of August and early autumn. The demand shows no signs of weakening, and while orders coming to hand are generally of medium size, the character of trade may be considered substantial. The tone of values is better throughout the general list, and, with stocks not excessive, the market is generally steady to firm for desirable material. The situation in North Carolina pine is growing more satisfactory, and with an improvement in the demand prices are slowly advancing. Stocks at all milling sections are about ample for the present demand, but in some grades there is a scarcity reported. There is a marked improvement in rough lumber and in box grades. The foreign inquiry is moderate, but later on is expected to show better form. Georgia pine is very steady, with receipts liberal and the demand fair. White pine is doing well, and with light stock the market is in good shape, with considerable sales reported for the week. In hardwoods the market is still quiet, with a light volume of business reported. Prices, however, continue fairly steady, while stocks of dry lumber are in some cases rather lighter than usual. There has been some inquiry from nearby towns during the past week for oak and ash, both of which are selling in small lots. The foreign trade in hardwoods continues unchanged under advices from the European market.

Charleston.

[From our own Correspondent.]

Charleston, S. C., July 22.

The movement in nearly every avenue of the lumber industry in this section is at present showing a fairly active character, and business, both at this port and Georgetown, is of moderate volume. There seems to be a steady demand from the usual sources in the North and East, while there is also a fair local demand for all desirable grades of lumber. Mills at Georgetown are generally busy and running regularly, while shipments are also considerable, both in yellow pine and cypress. The movement expected in August will, it is thought, be much greater than in July, as a number of vessels are due to load lumber late July and early August. Cypress is in good demand at Northern points, and prices are strong for dry stock and firm for all descriptions. Yellow pine is steady throughout the general list of values. During the past week the schooner O. H. Brown cleared for New York with 800,000 feet of lumber, while the following Clyde Line steamers also cleared for New York: Algonquin with 25,048 feet of lumber, Apache with 12,909 feet and Seminole with 175 packages of sash, doors and moldings. The total shipments of lumber for the season amounts to 45,225,034 feet, against 53,013,760 feet. Freight rates are steady, with the rates unchanged and the offering of tonnage fair. The only charter reported for the week was the schooner Anna, 465 tons, from Charleston to Elizabethport with lumber at \$5.25.

Brunswick.

[From our own Correspondent.]

Brunswick, Ga., July 22.

The lumber and timber trade of this

port is at the moment of a very satisfactory character, that is, the outlook for future business is more encouraging. Having long enjoyed a first-class coastwise lumber trade, and also a very considerable foreign business, Brunswick will, on the completion of the Brunswick & Birmingham Railroad, have new fields of virgin timber to draw from. So far during the present year this port has kept pace with others on the South Atlantic seaboard, as the following figures will show: The lumber shipments through the port of Brunswick for the first six months of 1901 amount to: Coastwise, 67,421,000 superficial feet of lumber, 945,272 pieces of crossties, 4,654,000 pieces of shingles, 413,000 pieces of lath and 648,000 feet of timber; total, roughly estimated in superficial feet, amounts to 110,471,052. The foreign shipments were 25,105,000 superficial feet of lumber, 24,652 cubic feet of hewn timber, 60,443 pieces of crossties, 403,000 pieces of shingles and 60,000 feet of logs, all amounting to about 28,187,483 superficial feet, making a grand total of 138,558,535 superficial feet foreign and coastwise. The total value of all business transacted through the port for same period amounts to \$13,000,000. The demand for lumber at present is fairly active, but shipments perhaps have not been as heavy as those of June. There are, however, a number of vessels in port and a number due to arrive which will create considerable activity during the month of August. A feature of trade in this section is the crosstie industry, which seems to become more valuable and of a greater volume of business as the seasons go by. At all milling sections adjacent to this port the mills have seemingly all the orders they can well carry at the moment, and at all interior sections of the State there is a very strong local demand for lumber. The Georgia Saw-Mill Association is making its mark, and has strengthened the market wonderfully, being at present very steady, with prices all along the list appreciating. Freights are firmer, with a moderate offering of desirable tonnage. The charters reported for the week are as follows: Schooner James Davidson, 420 tons, from St. Simons to Norwich with lumber at \$5.75; schooner W. H. Sumner, 546 tons, from Brunswick to Perth Amboy with switch ties at 17½ cents and lumber at \$5.25; schooner Mary J. Russell, 354 tons, from Brunswick to Philadelphia with dry cypress at \$5; schooner Nellie W. Howlett, 492 tons, from Savannah to Philadelphia with lumber at \$4.75; brig C. S. Sweeney, 570 tons, from Brunswick to New York with lumber at \$5.37½, 40 M per day, and schooner Helen N. Martin, 347 tons, from Brunswick to Boston and Portsmouth with lumber at \$6.

Mobile.

[From our own Correspondent.]

Mobile, Ala., July 22.

The timber trade of this port at the moment is very quiet, and the outlook not overly promising for future business. Sawn timber is steady at 12½ to 13 cents, 40-foot basis, and hewn timber when placed upon the market will bring 13 to 13½ cents per cubic foot, basis of 100 feet, average B1 good. Hewn oak is in limited demand at 15 to 18 cents per cubic foot. Exporters are not pressing business, and reports from European centers are not very encouraging. The London Timber Trades Journal of the 13th inst. has the following in regard to the situation: "The position of the timber import trade has undergone no material change since our last report. The stocks here are receiving large additions daily, and though the consumption is quite up to average, the import is more than suffi-

cient to keep pace with the demand. Free-on-board prices still continue of a haphazard character, and it is just now difficult to say what is the current level. The cheap freights have given a slight stimulus to forward buying, and now the season is well advanced, contract sales may be expected to become more general. In London the bearing influence of the large stock is still felt, and we are not able to report any improvement in the spot timber market. The tone and condition of the mahogany and hardwood trade may be regarded as unchanged, except so far as the 'small-wood' business is concerned, as for higher grade mahogany prices remain as before. Unreserved sales distribute stock at lower values and lessen the general demand, but it does not follow that holders will sell at lower rates, and prices will soon stiffen again, the market being stronger for the complete clearance of superfluous old stock. At the public sales there was a very full attendance of all sections of the trade." The local demand for saw logs is fair—cypress 8 to 14 cents per cubic foot, ash \$6 to \$8 per 1000 feet, oak \$8 to \$12 and cottonwood \$4 to \$6 per 1000 feet; pine saw logs \$6 to \$9 per 1000 feet, as to average and quality. The lumber situation is in much better shape, and while the volume of business is not great, there is a good substantial business being transacted. Mills, as a rule, in this section are all working up to their full capacity, and a number of mills have more than they can do to fill orders promptly. During the past week 1,367,490 feet of lumber left the port for Cuban and British and continental ports. The total shipments of lumber for the season amount to 99,334,676 feet, against 135,654,942 feet last season. Freights are nominally steady, charters being closed as follows: Norwegian ship, 1,300 tons, from the Gulf to Buenos Ayres with lumber at \$14, September; Norwegian bark, 930 tons, the same; Norwegian bark, the same from Pensacola; Norwegian bark, 750 tons, from Ship Island to Rosario with lumber at \$16; British steamer Helsingborg, 1,620 tons, from Mobile to Dundee with lumber on private terms, and the Norwegian bark Arizona, 1,239 tons, from Pensacola to Liverpool, Bristol or Greenock with timber at 110/.

Memphis.

[From our own Correspondent.]

Memphis, Tenn., July 22.

Business in hardwood circles in this city and in the Memphis district has been rather quiet throughout the week under review, the amount of transactions gotten through falling considerably under the average for the time of the year. In some directions there has been a fair amount of activity, though the week can be put down as unqualifiedly dull as compared with the corresponding week for the past two or three years. There has been practically nothing doing in the export division of the market. In the domestic market there has been some activity in the leading items, but the demand has not been at all general. One of the most pronounced developments of the week was the better inquiry for quartered white oak and some slight improvement in the demand for the better grades of cottonwood. Little business has actually developed in either, though the inquiries are taken as indicative of a better movement in these woods a little later. Plain red oak is still the best seller on the list. The stock of this ready for shipment is not large, and the present rate of movement is cutting quite a hole in the offerings now available in this center. Those who are making a specialty of ash are having about all they can do. The inquiry is brisk for one and two-inch

stock, though there is little demand for the three and four stuff. Quite a run is being made on dimension stock, and those who are in a position to offer any amount of this are having a good thing of it. The demand at the moment seems to be rather in excess of the daily output of the mills, and dry stock is being shipped out faster than the green is put on sticks. Cypress has continued to move briskly, the doors, sash and blinds people calling for it more rapidly than stocks will allow of fulfillment. This is the only wood on the market in which contracts for forward delivery are being booked. Some of the dealers here are sold ahead for seven or eight months, and still manufacturers in the lines indicated above are seeking to secure further deliveries. Quartered red oak is as dull as anyone could imagine, though stocks of this are large and in good condition. Poplar is moving nicely, especially the dressed stock, the demand being better for the moment than for quite a while. There is nothing particularly brisk about the rough, however. The price position of the market is still very satisfactory, the dealers showing little disposition, despite the much-talked-of dullness, to shade their prices any, except to a slight degree in cottonwood and some classes of gum which are notoriously slow sellers. The outlook for the next few weeks promises very little that is encouraging to the hardwood lumbermen, though they seem to have implicit confidence in the future of the market, all of them looking forward to an exceptionally good fall business. Hope seems to be the watchword around all the offices of the larger firms, the belief prevailing that a sharp reaction is bound to follow the present lethargic condition of the hardwood lumber industry. The various soft-wood mills and the woodworking plants of the city are still engaged to their full capacity. Building operations have been checked to some extent by the excessively hot weather, though this is offset in some measure by the fact that some of the large contractors are putting on both day and night forces in order to get their buildings done by the first of September, in accordance with agreements to that effect.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, July 20.

The statistical position of the market is not changed materially from its condition during the past two weeks, beyond declining about 25 cents per M. feet. The market, which on general average has been figured at \$14.25, is at \$14 today for common-point delivery, though it is extremely likely that this slight loss will be recovered soon on account of the copious rains which have fallen, as it is attributed to that cause for the loss. One year ago stocks were 304,000,000 in the hands of the long-leaf mills, with prices ranging from \$12 to \$12.50 for common-point delivery, against figures today of \$14 on 142,000,000 feet, the latter being the July 1 figures of stock on hand. Taking into consideration the great demand for saw timber of all classes, the fairly good condition of crops, the further fact that the stocks of dealers are below normal, it is fair to conclude that there are bright prospects for good prices being obtained during the remainder of the year. The stock that the mills have on hand at this time is badly broken, particularly in 1x12 boards and 2x4 piece stuff. The latter is very short in 18 and 20-foot, while the former item is short in every length from 16s up. Clear flooring, siding and ceiling is also short. Shiplap in eight-inch is not as plentiful as the manufacturers would like it to be. The Western trade con-

tinues to be active, though there is to be observed even in this market a tendency toward ordering planer stock of the higher grades. The enquiries coming to hand at this time, which a month ago were principally for boards and dimension, are today calling to a large extent, comparatively, for worked stock in B and better grades. It is difficult for many of the mills to figure on this class of business, because in this district Texas trade is always given the preference, and the mills are not able to fully satisfy it. There continues to be an active demand for cypress shingles, especially in primes and hearts, although there is not the same trouble experienced in getting orders filled that there was a short time since. Five and six-inch bests are quoted today at \$3.50 for delivery on an 18 $\frac{1}{4}$ to 22-cent rate; primes at \$3. The mills report being fairly well supplied with orders. Of course, after the great demand there has been since the Galveston storm, there is little on hand in the way of stock. The sash, door and blind industry, as represented by the mills in this city, report that trade is very good with them. The condition today is that there are not enough mills in the city to supply the local trade, and whereas a year ago the Beaumont sash factories were shipping to as far-away points as Mexican destinations, today there is hardly an order on the books that is to be delivered out of the city. The monthly consumption of lumber in Beaumont is over 2,000,000 feet, which gives an idea of the local building. There is nothing new whatever in the export market. Beyond the shipment of a few cargoes to Mexico and the rail shipments to the same place, there is practically nothing being done in this line. Prices are too low.

Lumber Notes.

The saw-mill plant of the Kresse City Lumber Co., near New Lewisville, Ark., was burned on the 20th inst. The loss is estimated at \$30,000, with insurance \$15,000.

William Farrell, known as the lumber king of Arkansas, died on the 18th inst. He was president of the William Farrell Lumber Co., whose holdings are valued at \$500,000.

Receipts of lumber at New Orleans, La., for the week ending the 19th inst., amounted to 3,190,000 feet, and for the season to 131,092,139 feet, against 97,624,115 feet last season.

The Cates Chair Co. of Thomasville, N. C., has been chartered, with a capital stock of \$25,000. The incorporators are E. W. Cates, J. W. Lambeth, J. L. Armfield and F. S. Lambeth.

The shipments of timber and lumber last week from Pensacola, Fla., amounted to 5,639,000 feet, oak staves 19,722 pieces, shingles 3000, shuttle-blocks 206,585 pounds, and ash logs 136.

The Edwards Lumber Co. of Dovesville, S. C., has been incorporated, with a capital stock of \$5000. The incorporators are J. D. Edwards of Darlington, H. A. Edwards of Hartsville and others.

A colony of Finns has arrived at Mission, Ga. They are under the management of H. Bachman & Bro. Among the industries to be established will be a large saw-mill and woodworking plant.

It is stated that Mr. Guckenheimer has purchased the lumber plant at Alexanderville, Ga., owned by Dixon, Mitchell & Co., and will probably operate the same. The plant consists of planing mill, saw-mill, etc.

The saw and planing mill, together with 500,000 feet of lumber, the property of J. M. Minns, near Clarksville, Texas,

was destroyed by fire on the 18th inst. The loss is estimated at \$10,000, with no insurance.

The Patillo Manufacturing Co. of Buford, Ga., has been organized to manufacture sash, doors, blinds, etc., with a capital stock of \$20,000. The incorporators are John Q. Allen, L. P. Patillo and W. B. Shadburn.

The St. Louis Cypress Co. of Plaquemine, La., has been incorporated, with a capital stock of \$30,000. The incorporators are Frederick Wilbert and John Wilbert of Plaquemine, and Alfred T. Gerans of St. Louis, Mo.

A furniture company was chartered last week at Hickory, N. C., with a capital stock of \$100,000, of which \$18,000 has been subscribed. The incorporators are George W. Hall, K. C. Menzies, W. B. Ramsey, F. B. Ingold and others, all of Hickory.

The shipments of lumber from the port of Mobile last week were 1,367,490 feet, and for the season 99,334,467 feet, against 135,654,942 feet last season. Shipments of timber last week were 2397 cubic feet of hewn and 76,336 cubic feet of sawn.

The Joseph Heppert Lumber Warehouse at Richmond, Va., was burned last week. The warehouse was packed with sash, doors, blinds, moldings and others dressed lumber, all of which was destroyed. The loss is estimated at \$10,000, on which there was \$3000 insurance.

Serpell Bros. of Prince George's county, Maryland, have just completed an extensive lumber plant at Seven Pines, on the south fork of Roaring creek, a few miles south of Elkins, W. Va. They own 1800 acres of choice timber land, with the privilege of taking in 5000 acres more.

The Chesapeake-Western Company, which controls the Chesapeake & Western Railroad east of Harrisonburg and extending west to Bridgewater, has purchased 200,000 acres of timber lands beginning at North River Gap, Va., where it is erecting a large saw-mill and lumber plant.

The German-American Lumber Co. of Pensacola, Fla., recently incorporated with a capital stock of \$100,000, has purchased the mill of the St. Andrew's Bay Lumber Co. of St. Andrew's, and has postponed the building of the proposed saw-mill until fall. The mill just purchased is of about 35,000 feet daily capacity.

The A. G. Cox Manufacturing Co. of Winterville, N. C., has been chartered, with a capital stock of \$5000. The company will manufacture all kinds of cars, wagons and agricultural implements. The incorporators are A. G. Cox, Rowan Cooper and others of Winterville, N. C., Fulford of Washington, N. C., and W. A. West of Greenville.

The North Carolina-Boston Lumber Co. has been organized, with a capital stock of \$25,000, for handling lumber and logs in Western North Carolina. The incorporators of the company are John W. Greenlaw, A. L. Greenlaw and W. C. Perkins of Boston, Mass. The company may be addressed care of Manning & Fouchee, Durham, N. C.

Among the clearances from the port of Jacksonville, Fla., last week were the following: Steamship Westover for Philadelphia with 300,000 feet of lumber; the Russian schooner Salme cleared for Liverpool with 244,247 feet; the Clyde steamers Navahoe for Boston with 250,000 feet of lumber and 1800 crossties, and the Iroquois for New York with 300,000 feet of lumber, 3000 crossties and 1500 bundles of shingles, with other cargo.

A meeting of the Baltimore Lumber Exchange was held last week, the presi-

dent, Mr. Lewis Dill, presiding. The J. H. Duker Box Co. was admitted to membership. Mr. Chas. C. Stran was re-elected secretary. The foreign exports of lumber from Baltimore for the six months ending June 30 were 31,167,000 feet and 1,125,314 staves, valued at \$1,298,333. England and Germany, respectively, received the greater part of these shipments.

The San Luis Lumber & Fuel Co., San Luis Potosi, Mexico, was chartered last week at Austin, Texas, with a capital stock of \$30,000. The incorporators are Edwin Chamberlain, W. B. Hamilton, M. C. Judson and George W. Brackenridge of San Antonio, Texas, and John A. Wright of the City of Mexico. This is the first charter to be filed under the new law authorizing the incorporation under the laws of Texas of companies to do business in foreign countries and States.

Secretary Smith, in his report submitted at the eleventh semi-annual meeting of the Southern Lumber Manufacturers' Association, held last week in St. Louis, gave an elaborate report of the lumber situation as existing in the States of Missouri, Arkansas, Texas, Louisiana, Mississippi, Alabama, Georgia and Florida. Reports from 122 mills show that shipments to July 1, 1901, amounted to 920,285,746 feet, and for the same period in 1900 they amounted to 685,054,912 feet, with stocks on hand July 1, 1901, aggregating 369,023,382 feet.

Messrs. Moltz and Beeber, representing capitalists of Williamsport, Pa., have purchased from the Douglas heirs of New York a tract of 17,000 acres of timber land located near the boundary line of Smyth and Grayson counties, Virginia. The consideration is said to have been \$103,000, one-fourth of which was paid in cash. It is understood that in order to reach the timber a railroad will be a necessity, and the Marion & Rye Valley Railroad will either be purchased by the owners of this timber or a new road will be built to a point on the Norfolk & Western Railroad, three miles west of Marion, Va.

The Lake Charles (La.) Ice, Light & Water-Works Co. has begun to use oil for fuel. The daily consumption for the three boilers will be about fifty barrels, and President Landry of the company estimates that the horse-power capacity of the plant will be increased 10 per cent, over that developed by coal or wood. Two storage tanks with a capacity of 450 barrels each are on their way from Pennsylvania.

The large smelting plant which has been under construction at Ducktown, Tenn., for about two years by the Tennessee Copper Co. has been completed at a cost, it is reported, of about \$1,000,000. This company, organized by leading capitalists in New York, promises to become a very important copper producer and to greatly increase the development of the copper interests in the Ducktown district.

The Republic Steel & Iron Co. has decided to put into operation its steel plant at Birmingham, which has been idle for some time. This plant will start with a daily run of about 100 tons.

During the first six months of this year shipments of pig-iron from Alabama and Tennessee amounted to 760,903 tons, an increase over the same period last year of 71,395 tons.

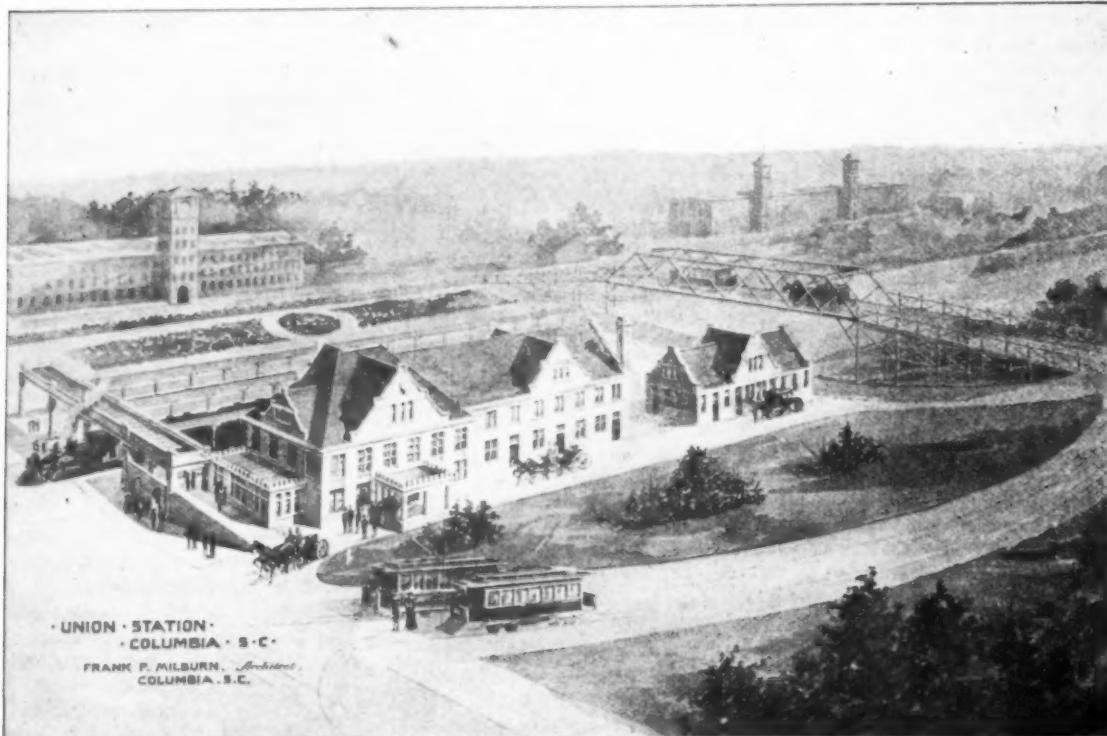
The sales in the Joplin (Mo.) district during the week ended July 20 were 10,243,790 pounds of zinc ore and 1,328,800 pounds of lead ore, valued in all at \$158,137.

MECHANICAL.

An Elaborate Structure.

The union railway station to be built at Columbia, S. C., by the Southern Railway Co. and the Atlantic Coast Line has

exhaust steam. It is only necessary that the engineer should see that they are blown off when the water-gauge shows it is required. These separators, used in connection with the Eclipse trap, make one of the best automatic separators on the market.



UNION RAILWAY STATION TO BE BUILT AT COLUMBIA, S. C.

already been briefly referred to in the Manufacturers' Record. It will be one of the most elaborate buildings of the kind in the South, and, for that matter, in the country.

The main structure will be 53x213 feet in size, three stories high on the track side and two stories upon the side shown in the accompanying illustration. It will be divided into the usual waiting-rooms, as well as ladies' parlors, smoking-rooms, etc. The rear wing will be fitted up for a restaurant and the operating department, while the upper stories will be used for general offices. In connection will be a smaller building 30x110 feet in size, to be utilized for baggage, express and mail rooms, while a covered entrance will be provided for passengers between the depot proper and the train sheds. The grounds surrounding will be ornamented by landscape gardening, and the depot will have paved approaches from the street, as indicated in the illustration. The plans and specifications were prepared by Mr. Frank P. Milburn, architect, for the Southern Railway.

The Eclipse Separator.

The accompanying illustration is of the Eclipse Separator, so well and favorably known to steam users. It is manufactured by the John Davis Company, 51-59 Michigan street, Chicago, and has been on the market several years, giving satisfaction. It has been thoroughly tested. The company has endeavored to make a separator with as few obstructions and have as little friction as possible, and has demonstrated that the water being so much heavier than the steam, that the water and oil will drop into the pocket and the dry steam passes on. By the use of the deflecting plates and projections at the openings it prevents any of the water traveling up the sides and being carried along by the steam.

They are so made that the horizontal one will work from either side and the vertical one either up or down. They are all made extra heavy for either live or

New Inside Moulding Machine.

The H. B. Smith Machine Co. of Smithville, N. J., has recently made a new departure in the design of inside moulding machines. It has the top head immediately following the rolls, the bot-

tom head following the top, and the side head at the outer end of the machine. The important points of this construction are: First, the stock is perfectly dressed on both the top and bottom sides, making it possible to perfectly hold it while it is being worked by the side heads. Secondly, by placing the bottom head immediately after the top head there are only the pressure bars to be swung back to make the entire side-head mechanism free and accessible for working around the knives.

The feed mechanism has two sets of seven-and-one-half-inch rolls, the upper rolls being heavily weighted, corrugated and divided into narrow sections, so that one or more can be removed for the handling of small and delicate work. In the feed gearing there is not a single gear revolving on a stud, all being tightly keyed to shafts which revolve in long babbitt bearings. The hoist screws of both upper rolls are connected, so that the operator turns but one crank to raise or lower them, but still each roll has independent action to allow for variation in stock. The patented compound variable feed permits the operator to vary the speed from ten to seventy feet a minute, while the machine is running, by the mere movement of a lever, or he can reverse same and back out stock should occasion arise.

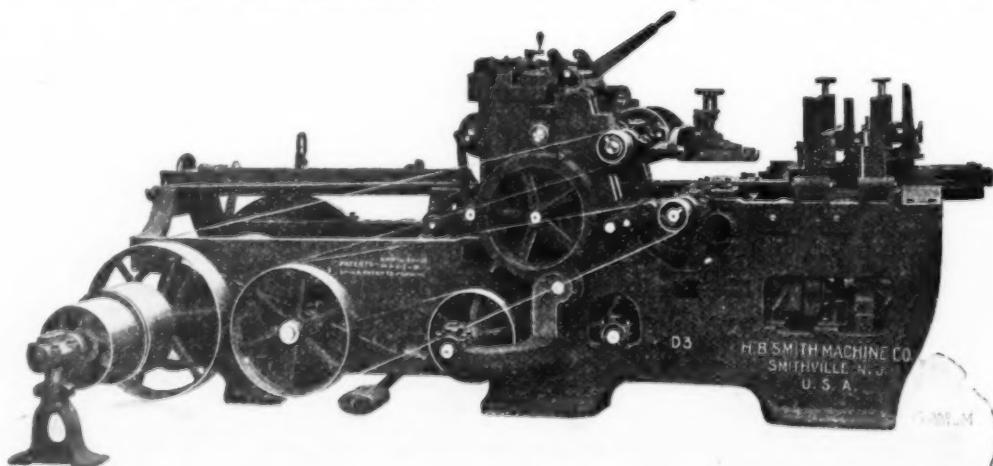
The top head has journals eleven inches long by two and one-half inches in diameter; is driven at both ends by four-and-one-half-inch belts; has adjustments around the head, allowing the knives to be set out three inches from the normal cut, and is solidly clamped on both sides after adjustment by the movement of a single lever. The chip-breaker is composed of a number of sections, each of which can be adjusted up or down, to or from this head for the proper holding of stock.

The bottom head has journals eleven inches long by two and one-eighth inches in diameter; is driven at both ends by four-inch belts; has adjustments around the head to allow the knives to be set out two and one-quarter inches from the normal cut; can be partly or entirely drawn out of the machine at the left-hand side, and is also locked on both sides after adjustment by a single lever.

The side heads have two journals, one seven inches long, the other four inches long by one and three-quarters inches in diameter; are driven by four-inch belts, which run over a drum on the second countershaft, giving direct pull on the spindles; has adjustments to allow the knives to be set out one and one-half inches from the normal cut; has tilting adjustments for bevel work, as well as ample vertical and lateral adjustments;



THE ECLIPSE SEPARATOR.



NEW INSIDE MOULDING MACHINE.

are locked to the heavy matcher bar after adjustment by a single lever.

Further and more explicit information can be had by writing to the Smith Machine Co.

The Ingoldsby Dump Car.

The rapid and ready unloading of cars used in connection with mining, smelting

Those portions of the ends of the cars which are outside and beyond the diagonal floor beams and bolsters can be smashed in or totally destroyed without affecting the balance of the car or its working, and in the event of loosened trucks ample protection is given to the car body by the inclined ends of the center trusses. In the steel construction the locking levers and all movable parts are

with perfect safety, while the train is in motion or at rest. The false top (used only for carrying bulky freight) on either the wood or steel cars is easily removable in sections in the event of desiring to shovel into or out of a car. They are furnished either in the form of gondolas or box cars.

The illustrations show the cars engaged in roadbed improvement on the Louisville

and in tubular as well as cylinder boilers. The cleaner is composed of the reservoir, funnel and upflow, return and blow pipes, the whole performing the work of an automatic machine. As is well known, when the water in a steam boiler becomes heated, currents are formed by the hotter water flowing upward and away from the source of the greatest heat, to be replaced by the colder water, which, in turn, becomes heated. When the Hotchkiss cleaner is attached the funnel is set in such position that its opening will intercept the hot-water currents, which by the action of gravity will flow into the reservoir through the upflow pipe. This movement displaces an equal quantity of the cooler water, which reaches a lower but cooler volume of water than that entering the funnel. Thus a constant circulation of water through the cleaner is maintained so long as firing is kept up, producing a continuous and automatic circulation. All of the water in the boiler passes through the reservoir of the cleaner, where, free from the agitating currents, the most favorable conditions are insured for the deposit of sediment, which is removed through the blow-off pipe whenever necessary. Fittings are made of special size for use in very large boilers, and where unusually bad water must be purified.

The Hotchkiss cleaner has found favor with large manufacturers throughout the United States, as is evidenced by the many concerns that have ordered it. The Havemeyer & Elder Sugar Refining Co. of New York has 126 in use, the Brooklyn water-works sixteen, the Geo. V. Hecker Company's flour mills fourteen, Spuyten Duyvil Rolling Mill Co. thirty, and the Carnegie Steel Co. forty. Nearly every State in the Union is represented among the users, and it is notable that large numbers have been sent to South America, Cuba, and even to Australia. Mr. William M. Carpenter of Havana has thirty in use alone, while a number have been installed on the principal sugar plantations of the island.

"Things and Thoughts" is the title of an attractive literary magazine which has begun publication at Winchester, Va., under the editorship of Mr. R. Gray Williams. The July-August number has among its features the address by Prof. Thomas Della Torre at the unveiling at Charleston of the Valentine bust of Henry Timrod, the Rev. Dr. James R. Graham's reminiscences of Stonewall Jackson, and contributions from Madison Cawein, the Kentucky poet; Mr. Robert T. Barton, Hal E. Quinn, Danske Dandridge and Mr. B. M. Carter, while editorially current literary tendencies in the South are discussed in a fresh way. The magazine comes in attractive form from the Eddy Press of Winchester, and deserves to become a success.

Among the leading articles in the August number of Cassier's Magazine of Illustrated Engineering are: "The Nile Reservoirs—For the Perennial Irrigation of Egypt," by John Ward, F. S. A.; "Utilizing the Sun's Energy," by Dr. Robert H. Thurston; "Commercial Education for Engineers," by L. S. Randolph, M. Am. Soc. C. E.; "The Machinery of Torpedo-Boats," by Walter M. McFarland, late chief engineer, U. S. N.; "Machine Molding—When It Is Economical," by Joseph Horner; "Pneumatics," by Prof. J. H. Kinealy; "Alternating-Current Power Work—Generators, Transformers and Motors," by T. P. Gaylor; "Zinc Mining in the United States—The Joplin Mineral District in Missouri," by D. A. Wiley.

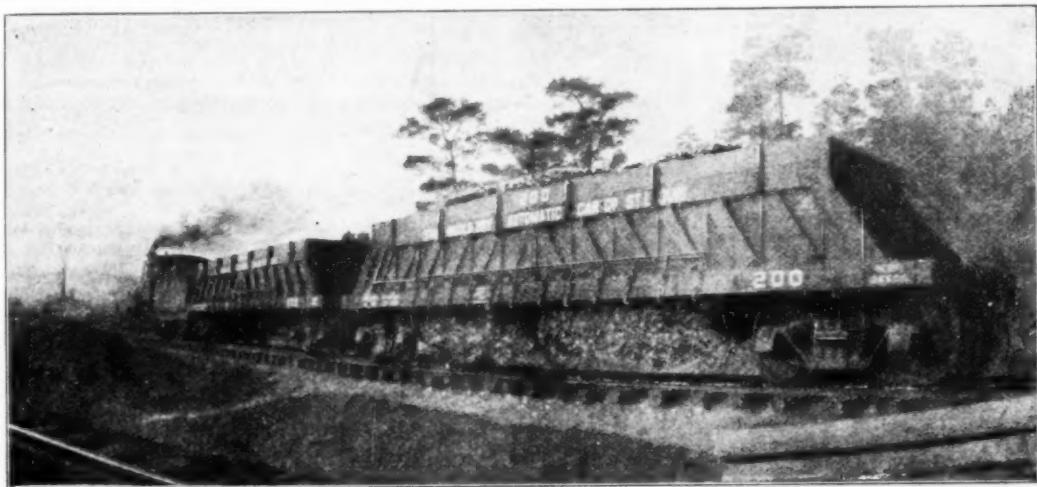


FIG. 1.—THE INGOLDSBY PATENT DUMP CAR.

and other industries, also in railroad construction, has been a problem to which much study has been given by engineers and mechanical experts generally. The Ingoldsby Patent Dump Car, however, seems to be a very satisfactory solution of the problem, judging from results of elaborate tests which in every way have been successful. It is manufactured by the Ingoldsby Automatic Car Co. of St. Louis, and already has found much favor with not only miners and manufacturers, but railroad companies as well.

Some of the advantages of the Ingoldsby cars, which are herewith illustrated, are these: They have steep slopes and large openings; large capacity and light weight. They completely dump their loads, the latter having a vertical unimpeded drop. They go back into immediate earning service. They can be used for almost any purpose for which an ordinary coal car can be used when dumping is not required. They can be shoveled into or out of when necessary. They spread ballast, widen banks or fill trestles rapidly and economically. They can be dumped while train is in motion or at rest. They carry all kinds of fine material without loss, as the joints are tight. They easily discharge frozen or compacted loads. They are safe and easy to operate.

In side-dumping the size of the openings and the slopes of the deflecting planes can be adjusted to suit the requirements of different materials. One man can unload 100,000 pounds of coal, ore, grain, etc., in ten seconds by hand-power.

With the air-dumping device any one car in the train or the whole train can be unloaded by the engineer in his cab, whether under full headway or at rest.

Hand or air-dumping devices are independent of each other, and can be worked separately or at the same time, as desired, or the air device can be left off the cars and everything be worked by hand-power. Less than the whole load can be dumped, as one door—or one-half door, if the cars are so ordered—can be let down at a time, thus only discharging one-fourth (or even one-eighth) of the total load.

Their movable doors give a large, flat bottom area for "loading both ways," and they are especially designed to safely withstand wrecks without damage.

amply protected by the overhanging members and main struts of the sides.

The "machinery" used on these cars is of the simplest possible nature, being mainly ordinary castings, with practically no machine work required in fitting or erecting, and its entire function is to

& Nashville Railroad system and in service at a smelting plant.

An Essential for Steam-Users.

A pamphlet recently published by Messrs. Leonard & McCoy of 161 Washington street, New York, gives some facts

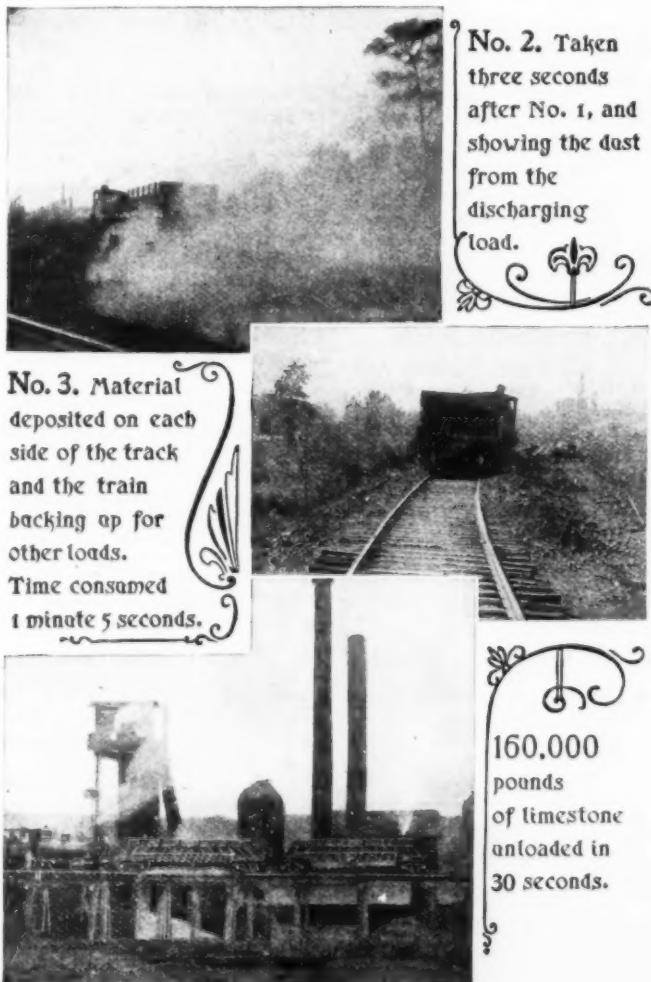


FIG. 2.—THE INGOLDSBY PATENT DUMP CAR.

close the bottoms of the cars after dumping. Complete destruction of it would not put cars out of service, as the locking, holding and dumping of the bottoms is entirely independent. The use of this machinery is to make it easy for one man to close and lock a train of any number of cars without a moment's delay, and

regarding the operations of the Hotchkiss Mechanical Boiler Cleaner, which will be read with interest by every engineer and steam-user. It is notable that the cleaner can be applied to the boilers of locomotives as well as stationary and marine engines, and is especially available in blast furnaces, rolling mills, saw-

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., July 24.

Phosphate rock in the local market has ruled steady, with moderate business reported. Fertilizer manufacturers are not making heavy purchases, but only buying to supply immediate wants. The following charters were reported for the week: British steamer Salopia, 1549 tons, from Fernandina to Stettin with phosphate on private terms, and British steamer White Jacket, 1406 tons, from Fernandina to Rotterdam at 16/3. The reports from all sections of the Southern phosphate belt are favorable, and mining is being carried on with considerable enterprise. New deposits are being opened up, and the new plants established have all the most modern improvements for increasing the output. South Carolina miners are reported as very active along the Ashley river, and the companies engaged are doing good work. The market in Charleston and Beaufort is steady, with a moderate domestic and foreign demand. The situation in Florida continues to show favorable indications, and the market for both hard rock and pebble is firm. Sales of hard rock at \$6.50 to \$7.50 per ton f. o. b. are reported, but miners are slow to make contracts for 1902 at these figures. There is a good inquiry from abroad for both hard rock and pebble, and the outlook for a good trade in both is very favorable. Shipments of hard rock from the ports for the six months ending June 30, 1901, show a total of 186,604 tons, against 188,489 tons last year. Land pebble shipments from Port Tampa for the same period amounted to 87,973 tons domestic and 60,883 tons foreign, or a total of 148,856, against 95,443 tons domestic and foreign in 1900. Advice from Tennessee continue to show a marked degree of activity in export shipments of rock, and the tone of the market is steady. There is a moderate trade in domestic rock, with values firm, while the foreign demand is improving. The various companies operating at Mt. Pleasant are generally firm in their views, and are not disposed to make long-time contracts at present figures. The output from the Mt. Pleasant district has just been given out, and shows some very encouraging figures. The Louisville & Nashville Railroad reports shipments of rock from Mt. Pleasant for the six months ending June 30, 1901, at 122,614 gross tons domestic and 74,124 gross tons foreign, or a total of 196,738 gross tons.

Fertilizer Ingredients.

In ammoniates the market has ruled active during the week, with a good demand from Eastern buyers. Stocks in the West are reported of moderate proportions, and producers firm in their views. Dried blood and tankage have sold during the week at full prices. Sulphate of ammonia is quiet, but firm. Nitrate of soda is firm for all positions.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	32 67/4	2 72/4
Nitrate of soda, spot Balto...	1 85	66 1 90
N. York...	1 85	66
Blood	2 32/4	2 35
Azotine (beef).....	2 35	66
Azotine (pork).....	2 35	66
Tankage (deconcentrated).....	2 25	66 2 27/4
Tankage (9 and 20).....	2 30	2 35 & 10
Tankage (7 and 30).....	20 00	66 21 00
Fish (dry).....	27 50	66 30 00

Phosphate and Fertilizer Notes.

The shipments of land pebble phosphate from Port Tampa for the six months ending June 30, 1901, amounted to 87,973 tons domestic and 60,883 tons foreign, or a total of 148,856 tons, against 95,443 tons domestic and 41,296 tons foreign in 1900.

Morris & Co. have opened their phosphate mine on the Mallory farm, near Franklin, Tenn. The mine promises to be the best opened in the country. The firm is making daily shipments.

The schooner Mary Curtis cleared from Charleston, S. C., last week, with 600 tons of phosphate rock. The total clearances of rock from Charleston for domestic ports for the season was 38,058 tons.

It is stated that the Virginia-Carolina Chemical Co. has bought up the stock of the Abbeville Cotton Oil & Fertilizer Co. of Abbeville, S. C. The report that the same concern has purchased the Athens Oil Co. has also been confirmed.

The shipments of hard-rock phosphate from the Florida ports for the six months ending June 30, 1901, were as follows: Savannah 77,574 tons, Brunswick 12,828 tons, Fernandina 73,564 tons and Port Tampa 22,638 tons, or a total of 186,604 tons, against 188,489 tons in 1900 and 250,015 tons in 1899.

The annual meeting of the Virginia-Carolina Chemical Co. of Richmond, Va., was held last week in New York. The annual report showed a gross profit for the year ending June 15 of about \$2,139,000. After charging off \$355,000 there were net earnings of \$1,783,955. Out of this were declared dividends at the rate of 8 per cent. on the preferred stock and 4 per cent. on the common stock, leaving a balance from the year's earnings of \$584,239. The net earnings were at the rate of about 8 per cent. on the common stock. The total surplus of the company is given in excess of \$3,175,000. The retiring directors were re-elected.

The report of the movement of phosphate from the Mt. Pleasant district in Tennessee for the month of June, 1901, has just been given out by the Louisville & Nashville Railroad, and is as follows: Domestic rock, 16,712 gross tons; export rock, 13,485 gross tons. This brings up the aggregate tonnage from Mt. Pleasant for the first six months of 1901 to domestic 122,614 and export 74,124 gross tons, or a grand total of 196,738 gross tons. To move this rock required 9837 freight cars, or about 655 loaded trains. The aggregate value was about \$600,000 to the producers. The cost of mining and loading on the cars was about \$1.50 per ton, or \$295,104, all of which was paid to the laborers who mined, hauled and loaded it on the cars. The total tonnage moved during 1899 was (both export and domestic) 358,569 gross tons; the total tonnage moved during 1900 was (both export and domestic) 359,630 gross tons. So that it will be seen that the total of 196,738 for the first six months of 1901 is holding up the average of the business very well.

A Kentucky Steel Plant.

The Stanyon-Miller Engineering Co. of Pittsburg, Pa., in a letter to the Manufacturers' Record referring to the report that that company is organizing a \$2,000,000 steel plant to be established in Louisville or some other point in Kentucky, writes as follows:

"There will probably be located in Kentucky a plant consisting of open-hearth furnaces, blooming mill, rod mill, wire mill, nail mill and other finishing departments in line with this business.

"We are not yet ready to ask for prices on any machinery which we do not ourselves build, but in order to get some of the plants which we are figuring on started as soon as possible, we are on the lookout for large engines from 800 to 2000 horse-power, that is, if we could get engines which have not been in use very long and for some reason are being taken out of other plants."

The Mineral Industry: Its Statistics, Technology and Trade. Volume IX. Publisher, the Scientific Publishing Co., New York. Price \$5.

Eight volumes of this invaluable publication, founded by Richard P. Rothwell, were published under his editorship. His work upon this ninth volume, which brings down the statistics, technology and trade of the mineral industry to the end of 1900, was interrupted by his death last spring, but it has been completed by Dr. Joseph Struthers, long associated with Mr. Rothwell. In the preparation of the present volume the editors had the valuable assistance of special contributors in this country and abroad, men trained in their special fields, the statisticians of this country and foreign nations, and professional men and experts of many lines, who have co-operated to continue in this volume the success which has come to the preceding ones. The founder of the series never stopped at labor or expense necessary to secure the services of leading authorities, and he made every effort to give his publication the character of accuracy, trustworthiness and freshness as an encyclopedia of the industries of which it treats. This spirit has been maintained in all of the nine volumes, and it has met the highest commendations from scientists and technologists, both at home and abroad, and being the only work published in any language giving the statistics of the mineral industry of the whole world, the nine volumes are the only up-to-date encyclopedia of the mining and metallurgical industries. That such an encyclopedia is necessary is demonstrated by the figures given in the ninth volume of the value of the mineral production and metal output of the United States in 1900. That was \$1,365,608,583, a gain of \$147,393,946 over 1899. In this gross total are included certain duplications, such as those of manganese and iron ore used in making ferromanganese and pig-iron, bauxite used in making aluminum and alum, coal used in making coke, lead used in making white and red lead and litharge, and a few other items, the whole amounting to \$116,768,662 in 1900. Deducting these amounts and the values of crude foreign ores or metals smelted or refined here, the net value of the mineral industry of the United States last year was \$1,152,474,982, an increase of nearly \$100,000,000. To keep track of this astounding growth accurate and regular statistics are necessary. These are given in "The Mineral Industry," which, in addition, publishes a number of special articles on the progress of metallography, the manufacture of titanium and its alloys, the progress of electro chemistry, notes on the concentration of finely-crushed ores, a review of the literature of ore-dressing, a summary of operations in the mining-stock exchanges and a general summary of the import duties of the principal countries in the world.

Over thirty contributors help to make the contents of the midsummer number of The Ladies' Home Journal even more varied and entertaining than the best of its August issues in previous years. From Alice Barber Stephens' typical Atlantic City beach scene on the cover to Maria Parloa's timely article on "Keeping the House Cool in the Dog Days," every page makes its special appeal to readers who want something light or restful or amusing to enjoy in hot weather. Besides three interesting articles on "The Singing Village of Germany," by Ida Shaper Hoxie; "The First White Baby Born in the Northwest," by W. S. Harwood, and "What Girl Life in Italy Means," by Marchesa Theodoli, there are three capital short stories in addition to the cur-

rent instalment of "Aileen," a page of poems and short articles "For the Summer Piazza," by John Kendrick Bangs, Amelia E. Barr, Tom Masson, Madeline S. Bridges and others, and no less than five full pages of pictures, including a double page of superb views.

TRADE NOTES.

Office Change.—M. B. Jacobs, the well-known New York cotton-goods broker, has changed his office to 56 Worth street, where he will be found in future.

Industrial Opportunities.—M. J. Mayes of Chattanooga, Tenn., may be addressed relative to a cotton factory, also flouring mills, offered for sale in another column.

Fire Engine for Sale.—H. O. Parker, clerk of Southern Pines, N. C., will give particulars about a fire engine offered for sale, as advertised in another column. The necessary hose and other equipment are included.

Boiler Works for Sale.—In the advertising columns will be found a reference to a boiler works offered for sale by Lee Bros. of Memphis, Tenn. The plant is equipped with all of the modern machinery, and is well located.

Opportunity for Manufacturing.—An extensive plant, which includes foundry and machine shop and other buildings, is offered for sale by H. F. L. Rummel, Reading, Pa. Details will be found in the advertising columns.

Timber Lands for Sale.—Joel F. Johnson of Madison Station, Miss., may be addressed relative to a tract of 13,000 acres of hardwood and pine timber which is on the market. It is located near the Illinois Central Railroad.

Can Study All Summer.—The plans of the International Correspondence Schools of Scranton, Pa., are such that there is no interruption to the courses of study during the usual vacation period. This affords an excellent opportunity for those who may be out of employment during the summer to take up a course by mail, and thus improve their time.

More Large Orders.—The Tower-Binford Electric & Manufacturing Co. of Richmond, Va., seems to be particularly fortunate in obtaining Southern trade. It has recently secured a contract for a complete electric-light plant to be installed at the Hollins Institute, Hollins, Va.; also for an electric-power plant for the Blackwell-Durham Tobacco Co. at Durham, N. C.

Ready for Business.—The Central Pipe & Valve Co. has removed its headquarters to 214-234 River avenue, Allegheny, Pa., and announces that it has a complete equipment for manufacturing and installing pipes, valves and fittings for high-pressure gas, water and steam lines. The company is prepared to furnish estimates quickly, and to do the work as it should be done.

Result of Quality.—A wide sale of the ice and refrigerating machinery manufactured by the Fred W. Wolf Co. of Chicago, Ill., is undoubtedly due to the high grade of apparatus which it offers the market. A few recent orders include a 10-ton plant for McKee's Rocks, Pa.; several plants for the Sandwich Islands, piping, fittings and other apparatus for Cleveland, Kansas City, Chicago, Portsmouth, N. H., Savannah, Passaic, N. J., New Orleans, and Sioux City, Iowa.

A Large Southern Contract.—The water-power on the Catawba river at Rhodhiss, N. C., is one of the largest in the United States, and will be utilized for cotton-manufacturing and other industries. The S. Morgan Smith Co. of York, Pa., recently shipped to the Rhodhiss Manufacturing Co. two pairs of 36-inch and one single 30-inch McCormick turbine, mounted in iron cases, with the necessary supply pipes, draught tubes, a complete rope-drive, as well as heads, shafts, couplings, bearings and a 1000-gallon fire pump.

Still They Come.—A recent order received by the Sterling Boiler & Pipe Manufacturing Co. of Hartford, Conn., is represented by a large contract for its dust-collecting and furnace-feeding systems for the Major & Loomis Company of Hertford, N. C. A representative of the Sterling Company is about to make an extensive Southern trip on account of the interest in its specialties in this section of the country. New England customers will be pleased to know that a branch office has been opened in the Exchange Building, Boston.

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CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD
 seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

Henry E. Fanshaw, president Consolidated Rubber Co., 135 Broadway, New York, and associates have about completed purchase of 70,000 acres of pine timber lands in the South. They will develop the properties, and are said to have already built one mill, and are to build another.

ALABAMA.

Anniston—Distillery.—M. Markstein and N. H. Reid will increase capacity of the Cold-water Distillery from 75 to 100 gallons of corn whiskey per day.

Anniston—Bag Factory.—Archibald Henderson has purchased the Anniston Bag Mill, and will increase its capacity; is now operating.

Barton—Limestone Quarry.—James Jackson, John Neff and G. E. Burbank have incorporated North Alabama Sand & Limestone Quarry Co., with capital stock of \$25,000, for development of limestone quarry.

Birmingham—Foundry and Machine Shop.—Charles A. Moffatt and A. Bonholzer will establish foundry and machine shop.

Birmingham—Gas Plant.—Franchise has been granted Caldwell Bradshaw, E. N. Culom and C. R. Brodix for constructing and operating the proposed gas plant previously reported. Illuminating and fuel gas will be manufactured and mains and pipe lines laid for distribution.

Birmingham—Cement Mill.—Muscogee Coal Co. contemplates erecting a small factory for manufacturing Portland and hydraulic cements from furnace slag.*

Bonsecour—Saw-mill.—E. J. Grove is rebuilding his saw-mill and adding new machinery.

Fayetteville—Lumber Mill.—Collier & Averett will rebuild their mill, recently burned.

Fruithurst—Winery.—Down Home Winery is remodeling its plant.

Gadsden—Pipe Plant.—Company with capital stock of \$150,000 is being organized for erection of an independent pipe line. Names of interested parties will be announced later. Probably J. E. Blackwood can give information.

Huntsville—Oil Wells.—Chartered: Southern Oil Co., capital stock \$100,000, by A. J.

Dyas, Luke Matthews, W. L. Halsey, James H. Bone, Milton Humes and others. Company has options on 10,000 acres of lands, and will drill oil wells.

Huntsville—Cotton Mill.—Outside capitalists are investigating with a view to erecting a cotton mill. Probably W. I. Wellman can say who is interested.

Huntsville—Oil Wells.—Madison Oil Co. has been incorporated, with capital stock of \$250,000, by Oscar Goldsmith, John Wallace, E. H. Foster, J. F. Woodard and others; has 15,000 acres of land under option.

Huntsville—Saw-mill.—Huntsville Lumber Co. has been organized to carry on the business of Stegall-Webster Lumber Co. (dissolved). Incorporators are Frank Webster, T. M. Wilson and Capt. Milton Humes; capital stock \$25,000.

Mobile—Oil Wells.—Mobile-Beaumont Oil Co. has been incorporated, with capital stock of \$300,000; H. T. Inge, president, and A. I. Selden, secretary.

Rosnoke—Electric-light and Water Works. Thos. V. Hall of West Point, Miss., has completed plans for the city's proposed water-works and electric-light plant, for which \$35,000 was appropriated recently. Bids are being advertised for.*

Tuscaloosa—Iron Furnace and Ore Mines.—A dispatch referring to the proposed iron developments and iron furnace mentioned last week states that Chas. R. Kellerman has returned from Pittsburgh, where he bought machinery for the furnace, to be a 200-ton plant for supplying seventy-five coke ovens. Dispatch also says that J. Lodge, referred to last week, is general manager of the Tuscaloosa Iron & Coal Co., and has bought \$10,000 worth of iron lands and \$45,000 worth of coal lands, to be developed in connection with the furnace.

Tuscaloosa—Cotton Mill.—A movement is on foot for the organization of a co-operative cotton-mill company. Probably W. G. Cochrane can give information.

Tuscaloosa—Artesian Well.—The drilling of the artesian well reported last week is not definitely decided, but is under contemplation. Probably W. G. Cochrane, mayor, can give information.

ARKANSAS.

Batesville—Mercantile.—Chartered: White River Wholesale Grocery Co., with capital stock of \$35,000, and J. T. Adams, secretary.

Little Rock—Ice Plant.—Retail Grocers' Association has decided not to erect the ice plant recently reported.

Little Rock—Copper Mining.—Incorporated: Gary Copper Mining Co., with capital stock of \$100,000, by Charles Seymour, E. M. King, D. A. Gray and W. F. Green.

Pine Bluff—Hardware Company.—Fox Hardware Co. (established) has been incorporated, with capital stock of \$100,000, by Fred Fox (president) and others.

FLORIDA.

Bartow—Telephone Franchise.—Peninsular Telephone Co., G. S. Van Buskirk, representative, is about to arrange for installing system in accordance with telephone franchise received recently.

De Funiak Springs—Ice and Cold-storage Plant.—S. A. Cawthon contemplates installing an ice and cold-storage plant.*

Jacksonville—Engineering Plant.—Merrill Stevens Engineering Co. is enlarging its plant by erection of main shop 105x107 feet, machine shop 45x40, toolroom and storehouse 46x40, blacksmith shop 67x36, boiler shop 67x70 and sheds 350x45 feet.

Kissimmee—Water-works.—City contemplates constructing system of water-works in connection with its electric plant. Address "The Mayor."

Pensacola—Mineral-land Development.—Pensacola Development & Investment Co. has been incorporated, with capital stock of \$133,000, for development of the mineral resources of West Florida by an effort to locate oil, natural gas, coal and phosphate. A. Greenhut is president; Wm. J. Forbes, vice-president; J. J. Hooton, secretary, and Sol Cahn, treasurer.

Sabreeze—Bridge.—Chartered: Peninsular Bridge Co., with capital stock of \$20,000, to construct bridges, causeways, etc., by C. C. Post, president; C. A. Ballough, vice-president; W. E. Ballough, treasurer, and Thos. A. Davis, secretary.

Starko—Electric-light Plant and Water-works.—City will install complete system of

water-works and electric lights; Collier & Brown, engineers, Atlanta, Ga.; E. P. Duncan, city secretary.*

Tampa—Cigar Factory.—V. Martinez Ybor's Sons Co. has been chartered to manufacture cigars, with capital stock of \$100,000, by S. V. Martinez, A. Ramiraz, M. Cheniz, R. M. Ybor and others.

West Palm Beach—Mercantile.—Chartered: G. G. Strohm Company, with capital stock of \$15,000, by G. G. Strohm and others, to conduct grocery.

GEORGIA.

Alexanderville—Lumber Mill.—Mr. Guckenheimer has purchased plant of Dixon, Mitchell & Co., and will probably operate same; plant consists of planing mill, saw-mill, blacksmith shop, etc.

Atlanta—Cotton Mill.—Elizabeth Cotton Mills states there is no truth in the report, mentioned last week, that it will install looms.

Atlanta—Pressing Company.—City Pressing Co. has been incorporated, with capital of \$1200, by D. H. Kirkland, Walter T. Colquitt, W. D. Harper and others.

Atlanta—Water-power Development.—The project for developing an extensive water-power near Atlanta, recently reported at some length, is yet in its infancy. A \$1,000,000 company is proposed, and the development of 8000 horse-power from the water flow, to be augmented to 20,000 horse-power by electrical equipment. A. E. Thornton has the enterprise in charge at present.

Blue Ridge—Telephone System.—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., is corresponding with T. S. McKinley relative to construction of system at Blue Ridge.

Douglas—Ice and Power Plant.—Douglas Ice & Power Co. has been incorporated, with capital stock of \$10,000, for manufacture of ice and electricity, by J. M. Ashly, John McLean, J. W. Quincy, B. Peterson and others.

Douglas—Real-estate Company.—Douglas Land & Improvement Co. has been incorporated by J. W. Tumcey, W. W. McDonald and others; capital stock \$25,000.

Dublin—Oil Mill and Fertilizer Factory.—It is reported that the Virginia-Carolina Chemical Co. (office, Richmond, Va.) has purchased mill of the Dublin Oil Mill & Ice Co., and will establish fertilizer factory in connection with this plant.

Griffin—Cotton Mill.—Rushton Cotton Mills, operating 5000 ring spindles and 160 looms, will double plant.

Hortense—Land Development.—B. O. Middleton & Son of Atkinson will organize a company for developing Hortense.

La Grange—Cigar Factory.—C. T. Freeman will establish cigar factory.

Macon—Terminals, Shops, etc.—Macon, Dublin & Savannah Railway Co. has filed a mortgage for \$1,500,000 for the purpose of making proposed improvements on its entire system which have been contemplated, including new shops.

KENTUCKY.

Ashland—Real-estate Company.—Chartered: Ashland Real Estate Co., with capital stock of \$20,000, by S. S. Savage and others.

Dayton—Gas Plant.—Bids are asked until August 19 for purchase of an exclusive franchise for twenty years; C. B. Hayward, city clerk.

Georgetown—Electric Plant.—Georgetown & Lexington Traction Co. will build an electric-power plant. Address care Younger Alexander, Brooksville, Ky.*

Hopkinsville—Ice Factory.—R. H. Holland and R. E. Cooper have organized a \$15,000 stock company for erection of ice factory.

Lexington—Gas Plant.—Lexington Gas Co. will meet July 31 to consider enlargement and improvement of plant.

Lexington—Oil and Gas Wells.—Chartered: Lexington Oil, Gas & Mining Co., with capital stock of \$50,000, by C. E. Smith, S. J. Roberts and others.

Lily—Coal Lands.—W. G. and Geo. W. Manley of Berlin, Germany, reported during the week as investigating coal lands of Northern Kentucky, will, it is reported, organize a \$1,000,000 company for extensive development of properties between Corbin and London; they may also invest in coal lands near Chattanooga. W. G. Manley is at present registered at the Read House, Chattanooga, Tenn.

Louisville—Gas-fixture Company.—Louisville

Gas Fixture Co. has been incorporated, with capital stock of \$10,000, by A. C. Montenegro, H. H. Bowen and others.

Louisville—Steel Mills.—Henry Stanton of the Stanton-Miller Engineering Co. of Pittsburgh, Pa., is investigating with a view to establishing an open-hearth steel plant at Louisville. If negotiations are concluded a \$2,000,000 stock company will be organized to build a plant for making daily 500 tons of rods, wire, fencing and nails.

Madisonville—Coal Mines, etc.—C. E. Morton of Madisonville, W. L. Gordon and Dr. N. M. Fugate are interested in organizing the Western Kentucky Coal & Coke Co., reported recently as proposed with capital stock of \$3,000,000 for developing coal lands, etc.

Mayfield—Coal and Ice Company.—Mayfield Coal & Ice Co. has increased capital stock from \$12,000 to \$18,000.

Milburn—Flour Mill.—Heiffer & Sons are installing new flour mill.

Murray—Water-works.—City has decided in negative as to water-works recently noted.

Paducah—Water-works.—Improvement of the water supply is being considered. Address Dr. Jeff. Robertson.

LOUISIANA.

Donaldsonville—Macaroni Factory.—Donaldsonville Macaroni Co. has been organized and established factory of 1600 pounds capacity per day.

Franklin—Oil and Mineral-land Development, etc.—D. B. Byrum, John F. G. Helmer, W. J. Lateer, E. F. Johnson and T. W. Chamberlain have incorporated Byrum-Helmer Plantation & Oil Co., Limited, with capital stock of \$1,500,000, for development of oil and mineral lands, construction of dams, dikes, etc.

Jeanerette—Canal, etc.—The parishes of St. Mary and Iberia have organized into a drainage district with A. L. Minot as president of the board, and will construct a drainage canal from Jeanerette to the Gulf, a distance of thirteen miles, which will open up to cultivation about 200,000 acres of lands. Hon. Robert Broussard of New Iberia is president of the Teche Drainage & Construction Co., recently organized for construction of two dredges which have been completed, and will commence the work of dredging for the proposed canal at once. J. H. Keranigan is the consulting engineer.

New Orleans—Chartered: Swift & Co., Limited, with capital stock of \$10,000, for dealing in slaughter-house products, by E. D. Saunders, G. F. Swift, L. A. Carton, A. H. Veeder and others.

New Orleans—Motor Works.—Gardner Motor Works, reported during the week as burned at a loss of \$150,000, will be rebuilt.

New Orleans—Oil and Mineral-land Development.—James A. Pierce, E. Martin, D. W. Blake, H. O. Bertel and others have incorporated Alpha Oil & Mineral Co., with capital stock of \$500,000, for development of oil and mineral lands.

New Orleans—Paper Mill.—United Railway & Trading Co. has, it is said, contracted for a \$75,000 outfit for the manufacture of paper from bagasse; capacity twenty tons per day.

Plaquemine—Lumber Company.—St. Louis Cypress Lumber Co. has been incorporated, with capital stock of \$30,000, by Frederick Wilbert, John Wilbert and others.

Plaquemine—Lumber Company.—Frederick Wilbert and John Wilbert of Plaquemine and Alfred T. Gerrans of St. Louis, Mo., have incorporated the St. Louis Cypress Co., with capital stock of \$30,000, to deal in lumber, etc.

MARYLAND.

Baltimore—Stables.—Chartered: Imperial Stables, for conducting livery business, by Joseph Wiesenfeld and others; capital stock is \$20,000.

Baltimore—Glass Works.—Frank E. & Henry A. Davis have completed plans for a 73½x304-foot building, to be erected by Swindell Bros. in replacing their glass works destroyed by fire recently.

Baltimore—Cannery.—Incorporated: W. F. Assau Canning Co., capital stock \$50,000, for canning vegetables, fruits, etc., by Wm. F. Assau, Herman F. Knollenberg, Wm. H. Krueger and others.

Baltimore—Woolen Mill.—Nicholas W. Steele, Chas. T. Westcott and others will organize a company to build a woolen mill; site and buildings have been bought and ma-

chinery contracted for; will also erect 70x108-foot and 58x108-foot buildings; will use water-power.

Cumberland—Brick Works.—Benjamin Foxall has established kiln with capacity of 100,000 bricks.

Lonaconing—Coal Mine.—John B. Clise has purchased fifty-six acres of coal lands near Lonaconing and 188 acres near Miller mine, which he will develop.

Thurmont—Mail-box Factory.—Samuel M. Birely of Thurmont, John C. Motter of Frederick, W. W. Swiegelart of York road and others have organized Swiegelart Manufacturing Co., with capital stock of \$5000, to manufacture a rural mail box patented by Mr. Swiegelart.

Washington, D. C.—Stone Quarry.—Litholite Stone Co. has been incorporated by J. Wilson Bunn of Lansing, Mich.; T. Franklin Athey, Albert Lake and J. A. McCrary to engage in stone, cement and lime business.

Washington, D. C.—Bridge.—It is reported that the Pennsylvania Railroad Co. will build a \$150,000 stone and steel bridge across the Potomac river; Thos. Rodd, chief engineer, Philadelphia, Pa.

Washington, D. C.—Publishing.—Chartered: New Century Co., with capital stock of \$20,000, by F. Eagan (president) and others.

MISSISSIPPI.

Aberdeen—Ice Plant.—Emile Christian will establish 15-ton ice plant.

Ackerman—Compress and Electric-light Plant.—Ackerman Compress & Electric Light Co. has been incorporated, with capital stock of \$25,000, by J. E. Cobb, A. Crainer, W. A. Hanna and others.

Bond—Electric-light Plant.—J. E. North Lumber Co. will install electric-light plant.

Hattiesburg—Water-works.—Capt. T. W. Nichol of Mobile, Ala., has been retained as consulting engineer for construction of water-works at Hattiesburg, for which \$30,000 was recently voted. Plans are to be made and bids asked for.

India—Saw-mill.—Lott & Perkins are building saw-mill and dry-kilns.

Merrill—Saw-mill.—Taylor & Co. are building saw-mill.

MISSOURI.

Joplin—Mining.—Chartered: Big Four Mining & Milling Co., with capital stock of \$50,000, by W. H. Mau, W. H. Simpkins, W. G. Hill and others, all of St. Louis.

St. Louis—Mercantile.—Chartered: Taylor Mercantile Co., with capital stock of \$5000, by H. C. Taylor and others.

St. Louis—Bedding and Upholstery Company.—Evans-Smith Bedding & Upholstering Co. has increased capital stock from \$15,000 to \$20,000.

St. Louis—Gaslight-burner Factory.—Incorporated: Burrows Gaslight Co., capital stock \$200,000, to manufacture gaslight burners, by John P. Maynard of 4758 Labadie avenue, Richard Forrester, Walter A. Follett and others.

St. Louis—Woolen Mills and Clothing Factory.—Mayfield Woolen Mills Clothing Co., recently reported incorporated with \$1,200,000 capital, is preparing to carry out its previously-announced intention for removing its Mayfield (Ky.) and Louisville (Ky.) woolen mills to St. Louis to consolidate with its wholesale establishment. Plans and specifications are in preparation for 376x376-foot building, eight stories high; mill will be a 20-set plant; 5000 garments for clothing will be manufactured daily. A. H. Duncan has been elected president.

St. Louis—Rolling Mill.—Hirsch Rolling Mill Co., lately reported incorporated with \$125,000 capital, has organized with M. A. Hirsch, president and general manager; Eugene D. Hirsch, secretary, and L. K. Hirsch, treasurer; company will operate plant for manufacturing merchant and refined bar iron, iron and steel, angles, splices, etc. Address is Eoff avenue and Missouri Pacific Railroad tracks.

St. Louis—Development.—Chartered: International Development Co., with capital stock of \$2,500,000, by Eugene Sweeney and H. D. Mephan of St. Louis and J. G. Gray of Wilmington, Del.

St. Louis—Lead and Oil Company.—Collier White Lead & Oil Co. has been chartered, with capital stock of \$10,000, by Chas. W. Ferguson, Walter Baker, Chas. M. Shirley and others.

St. Louis—Bridge and Terminals.—Company has been formed and received franchise to build a third bridge across Mississippi river between East St. Louis, Ill., and St. Louis, and it will very likely have terminal facilities on both sides of the river in connection with the bridge. M. M. Stevens, mayor East St. Louis, Ill., may be interested.

Trenton—Manufacturing.—Trenton Ruskin Manufacturing Co. has been incorporated, with capital stock of \$13,500, by H. Wettslin, H. F. Hoffman, R. M. Cook et al.

NORTH CAROLINA.

Concord—Smelting Plant.—C. McDonald, mentioned last week in connection with reported erection of a smelting plant, states that H. B. Meech of New York city, claiming to represent Northern capitalists, was in Concord last week investigating regarding sites for such plant near Concord.

Durham—Mercantile.—Chartered: Somers & Dailey Co., for conducting dry goods business, by John C. Dailey and others; capital stock is \$50,000.

Graham—Cotton Mill.—Chartered: Travora Manufacturing Co., capital stock \$100,000, by J. Harvey White, Edwin White, M. H. White and Mrs. Emma White; company will own and operate the 2500-spindle cotton mill reported during week as to be built by J. H. White & Bro. at a cost of \$52,000.

Greensboro—Drug Company.—Freemont Drug Co. has organized, with G. D. Best, president, and Dr. G. W. Lewis, secretary.

Greensboro—Water Tank and Tower.—It is reported that the city will build water tank and tower; J. M. Bandy, city engineer.

Greensboro—Mantel Factory.—Greensboro Table & Mantel Co., lately reported incorporated, has organized with John R. Cutchin, president, and W. T. Hamner, secretary, and will build its proposed factory, erecting two buildings 48x36 feet, also engine and dry houses; \$20,000 have been subscribed.

Hickory—Collar Factory.—Hickory Collar Co. has been incorporated, with capital stock of \$10,000, and will establish a factory with capacity of 144 dozen leather collars per day; incorporators, C. H. Geltner, Harry Wells and G. H. Geltner.

Lenoir—Flour Mill.—It is reported that Geo. W. Connally will build new flour mill.

Marshall—Mining.—Carolina Mineral Co., Geo. E. Brightson, president, will install new boiler, engine and other machinery; New York office, 140 Maiden Lane.*

Marshall—Cotton Mill.—A company is being organized for the erection of a cotton mill to be operated by water-power, and a Mr. Pritchard is interested. Power will be furnished by the North Carolina Water & Electric Power Co., now building plant.

Milledgeville—Water-power Development, Whitney Reduction Co. has purchased the power of the Yadkin river from Milledgeville to the falls, and will soon institute active developments. The total horse-power proposed to be developed is 46,000, to be distributed electrically within a radius of eighty miles for use by manufacturing and other industries. Mention of large purchases of land by president of the company named was made lately under Montgomery county, E. B. C. Hambley at Gold Hill, N. C., is president.

North Wilkesboro—Clothing Factory.—Mountain City Clothing Co. has been incorporated, with capital of \$1200, for the manufacture of clothing.

Raleigh—Mercantile.—Chartered: W. E. Jones Company, with capital stock of \$5000, by W. E. Jones and others.

Randolph County—Copper Mine.—W. D. Simpson of Anderson, S. C., is developing copper properties in Randolph county.

Sanford—Cotton Mill.—Sanford Cotton Mills is reported to have ordered 100 additional looms; now has 256.

Sanford—Building.—Chartered: Commercial Building Co., with capital stock of \$15,000, by T. L. Ohlsholm, W. A. Crabtree, W. A. Munroes and others, for erection of houses, public halls, etc.

Spies—Lumber Mill.—Wright & Lowdermill will install lumber mill in connection with their shingle mill.

Statesville—Hardware Company.—Evans Hardware Co. has been incorporated, with capital stock of \$30,000, by A. J. Evans, J. H. White and others.

Tarboro—Cotton-oil Mill.—F. S. Royster Guano Co., Norfolk, Va., is considering the advisability of erecting a mill for furnishing its own cottonseed meal at its Tarboro plant.*

Thomasville—Chair Factory.—Cates Chair Factory has been incorporated, with capital stock of \$25,000, by E. W. Cates, J. W. Lambeth, J. L. Armfield and others.

Winterville—Carriage Factory.—A. G. Cox Manufacturing Co., reported recently to enlarge and install new machinery, will manufacture carriages, wagons, etc., and has incorporated, with capital stock of \$5000. A. G. Cox, Rowan Cooper, W. B. Wingat & R. Dawson and others are interested.

Woodlawn—Lumber Company.—North Carolina Boston Lumber Co. has been organized, with capital stock of \$25,000, for handling lumber and logs in Western North Carolina, by John W. Greenlaw, A. L. Greenlaw and W. C. Perkins, all of Boston, Mass. Incorporators may be addressed care of Manning & Fouchee, Durham, N. C.

SOUTH CAROLINA.

Anderson—Cotton Mill.—Orr Cotton Mills will install 1500 more spindles in its building; complete plant will have 23,000 spindles and 700 looms.

Columbia—Cotton-oil Mill.—F. S. Royster Guano Co., Norfolk, Va., is considering the advisability of building a mill to furnish its own cottonseed meal at its Columbia plant.*

Cross Hill—Mill.—Cross Hill Mill Co., with capital stock of \$15,000, has been incorporated by J. H. Miller, J. A. Davenport, J. G. Williams and W. C. Rasker.

Denver—Flour Mill.—S. C. George has purchased flour-mill machinery of Watkins & Co. at Princeton, S. C., and will remove same to Denver.

Dovessville—Lumber Mill.—Edwards Lumber Co. has been incorporated, with capital stock of \$5000, by J. D. Edwards of Darlington, H. A. Edwards of Hartsville and others.

Greenwood—Marble Works.—J. R. Leavell has established marble works.

Newberry—Sewerage.—City will hold an election August 20 to decide issuance of \$25,000 of bonds for constructing sewerage system; Otto Klettner, mayor.

TENNESSEE.

Athens—Hardwood Factory.—A. G. Cortland has secured building and will install machinery for manufacture of hardwood billets, operating as the A. G. Cortland Hardwood Manufacturing Co.

Bristol—Laundry.—C. L. Sevier, proprietor of Ideal Steam Laundry, will erect new building, one story, of brick, 40x100 feet.

Caney Branch—Flour Mill.—J. A. Linz will put rollers in his steam mill.

Chattanooga—Hame-string Factory.—A company is being formed for the manufacture of an iron hame-string invented by John W. Dalton. George W. Chamlee is counsel.

Chattanooga—Barrel Factory.—It is said that a company has been formed for erection of a barrel factory. Probably secretary Chamber of Commerce can give information.

Chattanooga—Brick and Tile Works.—Chattanooga Novelty Works will enlarge for manufacture of brick and terra-cotta tiles, etc.

Cleveland—Electric-light Plant.—Cleveland Electric Light Co., previously reported organized, has purchased site for proposed plant.

Cleveland—Water-works.—City will hold an election September 2 to vote on the purchase of present water-works system for \$55,000. Address "The Mayor."

Columbia—Flour Mill.—E. E. Collins, C. J. Davis, Geo. L. Hooper and others have formed Star Milling Co., capital stock \$10,000, to build a 125-barrel flour mill.

Del Rio—Flour Mill.—J. S. Stokeley will remodel his buhr mill to rolls.

Franklin—Phosphate Mines.—Morris & Co. are opening phosphate mines.

Maryville—Flour Mill.—McNutt Bros. and S. F. Cowan have purchased and will remodel the Maryville City Mills.

Nashville—Glass Factory.—L. Stickle of Indiana and associates propose the erection of a \$50,000 glass bottle factory, and possibly J. B. Killebrew can give addresses.

Nashville—Roofing Company.—Chartered: Uncle Hiram Roofing Co., with capital stock of \$10,000, by John L. Ward, T. B. Agerton, W. H. Lindsay and others.

Summitville—Lime Plant, etc.—Summitville Lime Co., reported recently, will expand \$6000 on erection of two kilns with capacity of 600 bushels of rock every twenty-four hours. Stone-crushing plant will also be installed.

Sweetwater—Barytes Mill.—It is reported that New York parties have leased plant formerly occupied by Sweetwater Mill Co., and will establish barytes mill. Names of those interested will be announced later.

Waverly—Electric-light Plant.—Waverly Electric Light Co. has been chartered by Arthur E. Justle, B. R. Thomas, J. P. Cowen and others.

TEXAS.

Alpine—Telephone Company.—Alpine-Terlingua Telephone Co. has been incorporated, with capital of \$1000, by A. M. Turney, R. L. Neville and J. C. Bird.

Bay City—Rice Mill.—I. Marks of Crowley and W. T. Goode of Kansas City have organized and chartered Bay City Rice Milling Co. for establishment of rice mill; capital stock is \$50,000.

Beaumont—Oil Wells.—Chartered: Mound City & Beaumont Oil Co., with capital stock of \$500,000, by John C. Nial of St. Louis, Mo.; Fred Hooper and John Misegades of Alton, Ill.; J. D. Cameron and others of Beaumont.

Beaumont—Oil Wells.—Chartered: Oklahoma & Texas Oil Co. of Perry, Okla., and Beaumont, by F. G. Moore, C. Crawford, C. E. Dennis, J. A. Hansen and others of Perry, T. G. Adkinson of Beaumont and others.

Beaumont—Oil Wells.—Incorporated: Fountain Oil & Fuel Co., with capital stock of \$200,000, to drill for oil, by J. D. Fountain of Pearl River, Miss.; J. V. Williams of Meridian, Miss.; A. H. Russ of New Orleans, F. L. Dilley of Pine Bluff, Ark., and others.

Beaumont—Townsite Company.—Incorporated: Texas Townsite Improvement Co., capital stock \$50,000, by C. C. Waller of Anderson, R. E. Burt of Dallas and Jas. S. Welch of Alamogordo, N. M.

Beaumont—Oil Wells.—Young Lady's Oil Co. has been incorporated, with capital stock of \$250,000, for constructing an oil-pipe line, by Louis F. Smead of New York, L. Leota Stump of Port Arthur, Maude A. Wisdom of Beaumont and others.

Beaumont—Oil Wells.—Chartered: Madeleine Consolidated Oil Co., with capital stock of \$1,500,000, by T. B. Burbidge, J. H. Allen, S. R. Bartlett of Colorado Springs, W. O. Gaton of Fort Worth and others.

Cleburne—Oil-fuel Plants.—Gulf, Colorado & Santa Fe Railway will install oil-fuel plants at its Cleburne shops; also has contracted for about \$50,000 worth of steel tanks to be erected at Cleburne and other towns, tanks to be eleven in number, with capacity for 37,000 barrels of oil each; L. J. Polk, general manager at Galveston.

Cleburne—Electric-light Plant.—Mr. Worthington, representing the electric light and street railway of Paris, Texas, has applied for franchise for operating a plant of each kind in Cleburne.

Dallas—Construction Company.—Incorporated: Archer Construction Co., with capital of \$200,000, by Chas. E. Archer, Walter Clark and John M. Archer.

Denton—Mercantile.—Chartered: J. B. Wilson & Co., with capital stock of \$35,000, by J. B. Wilson and others.

El Paso—Telephone Franchise.—A \$50,000 company has been organized in Cleveland, Ohio, to install the telephone system for which franchise was granted recently to Mrs. Britt of Chicago. W. W. Bridgers of El Paso is attorney.

El Paso—Iron Foundry.—Pass City Foundry Co. will enlarge and improve its plant, practically rebuilding it.

El Paso—Smelter.—American Smelting & Refining Co. will at once arrange to rebuild its smelter recently burned; will enlarge over former capacity and erect fireproof buildings.

El Paso—Oil Wells.—Equitable Oil Co. has been incorporated, with capital stock of \$5000, by B. J. Dressen, A. D. Martine, W. T. Nixon and others.

Emory—Grist Mill and Gin.—Incorporated: Emory Gin & Mill Co., capital stock \$5000, by A. P. Fitzgerald, W. L. Green and B. Fitzgerald.

Fort Worth—Oil Wells.—Big Hill Oil & Development Co. has been incorporated, with capital stock of \$30,000, by M. P. Beasley, A. J. Roe, J. R. Pollock and others.

Galveston—Oil Refinery, Pipe Lines, etc.—Forward Reduction Co., reported recently as increasing capital from \$3,000,000 to \$5,000,000, will use the additional capital for development work on its 100,000 acres of oil lands in Texas and Louisiana. Company is letting contracts for its proposed oil refinery, which will cost \$300,000 and have a daily capacity of 2500 barrels of crude oil, also for storage tanks, tank cars, etc. Office in Cleveland, Ohio, is at 1613 Williamson Building; in New York at 27 William street.

Georgetown—Oil Company.—Georgetown-Waco Oil Co. has been incorporated, with capital stock of \$150,000, by Ed McCullough of Waco, president; G. W. Graves of Waco, treasurer, and F. W. Caruthers of Georgetown, secretary.

Houston—Cotton Compress.—It is reported that Geo. H. McFadden & Bro. of Philadelphia, Pa., will build compress of 10,000 bales capacity.

La Porte—Oil and Gas Wells.—Chartered: Washington Oil & Gas Co., with capital stock of \$20,000, by E. S. Beazley of Shepherd, Jack Beazley of La Porte and S. W. Hill of Camilla.

Llano County—Iron Mine.—Chartered: Llano Iron Mining Co., capital stock of \$250,000, by Richard P. Travers and others of Chicago, Ill.

Mart—Oil Mill.—Marlin (Texas) Oil Co. has increased capital to build a cottonseed-oil mill at Mart.

Palestine—Cotton-oil Mill.—Palestine Cotton Oil Co. has increased capital stock from \$50,000 to \$100,000.

Palestine—Street Improvements.—It has been decided affirmatively to issue the \$40,000 of street-improvement bonds previously noted. Address "The Mayor."

Paris—Oil Wells.—Incorporated: Texas Oil & Development Co., by R. H. Cornell and B. W. Wortham of Paris, J. H. Wolf, E. P. Ramsey, J. P. Mette and others of St. Louis, Mo., to drill for oil; capital stock \$250,000.

Paris—Compresses.—Chartered: Transcontinental Compress Co., with capital stock of \$250,000, to construct and maintain compresses, gins, mills, elevators, wharves, etc., by P. Anderson of Fort Worth, J. D. McDade of Paris and others.

Paris—Collar Factory.—W. S. Trigg Saddle Co. is preparing to add a \$10,000 collar factory to its plant.

Pecos—Oil Wells.—Chartered: Cactus Oil Co., with capital stock of \$10,000, by T. J. Hefner, W. L. Ross, W. W. Camp and others.

San Antonio—Stove and Hardware Company.—Chartered: Schultz's Stove & Hardware Co., with capital stock of \$30,000, by Max Schultz, Herman Schultz and William Schultz.

San Antonio—Undertaking Establishment Chartered: Zizik-Shelley Undertaking Co., with capital stock of \$10,000, by A. A. Zizik, Joseph Shelley and others.

Schulenburg—Oil Mill.—Farmers & Ginners' Cotton Oil Co. has been organized, with O. M. Pate, president; T. C. McCorkle, vice-president, and W. F. Skillman, secretary and treasurer; capital stock is \$30,000; work will be commenced at once on erection of mill.

Sherman—Sewerage System.—The city has received plans and specifications for its proposed sewerage system and advertised for bids on construction. John W. Maxey, Houston, is consulting engineer.*

Sulphur Springs—Cotton-oil Mill.—Chartered: Farmers & Ginners' Cotton Oil Co., with capital stock of \$30,000, by W. F. Skillman, J. N. Ponder and C. M. Pate.

Terrell—Sewerage.—New Odorless Sewerage Co., with capital stock of \$10,000, has been chartered by Matthew Cartwright, James Muckelroy, W. P. Allen and others.

Texarkana—Fair Association.—Chartered: Bowie & Miller County Fair Association, with capital stock of \$10,000, by A. T. Passmore, C. B. De Witt and others.

Texas—Oil Wells.—Dr. St. J. B. Graham of Savannah, Ga., who owns a number of acres of lands in Texas, will probably organize a stock company for developing the property.

Waco—Brewery and Ice Plant.—Anheuser-Busch Brewing Co. (main office, St. Louis, Mo.) has purchased site and will establish 100-ton ice plant, and is said to be contemplating erection of brewery.

Waxahachie—Mining.—Chartered: Gracy Mining & Mineral Co., with capital stock of \$50,000, by J. F. Strickland, Hans Pollard and J. A. Gracy.

Wharton—Oil Mills.—Chartered: Wharton Oil & Cotton Co., to build and operate cotton-oil mills, cotton gins, etc., capital stock being \$84,000; incorporators are R. H. D. Sorrel, H. J. Bolton and R. L. Heflin.

Wilmer—Cotton Gin.—Chartered: Wilmer Gin & Cotton Co., with capital stock of \$10,000, by H. A. Ruenfels, W. H. Gaston, Jr., K. L. White and others.

VIRGINIA.

Alexandria—Mining and Smelting.—Bonanza Mining & Smelting Co. has been incorporated, with capital stock of \$250,000, by James R. Caton, H. B. Caton and others.

Alexandria—Partition Factory.—Reavis Fireproofing & Partition Co., to manufacture metallic fireproof and vermin-proof partitions and ceilings, with capital stock of \$10,000. K. Kemper is local attorney.

Alexandria—Manganese Company.—Cedar Creek Manganese Co. has been incorporated, with capital stock of \$50,000, by Saml. T. Hoffer of Frederick, Md., president, and others.

Danville—Water-works.—City contem-

plates issuing \$6500 of bonds for enlargement of water main. Address "The Mayor."

Farmville—Electric-light Plant.—Electric Construction Co. of Richmond has received contract for installing electric plant at Virginia Normal State School.

Franklin—Electric-light Plant and Water-works.—City contemplates enlarging its electric plant and constructing a system of water-works; franchise for both water and lights may be considered. Address J. R. Knight.*

Harrisonburg—Saw-mills and Timber Lands.—According to a dispatch, the Chesapeake-Western Company, composed of New York capitalists, has purchased recently and secured control of 200,000 acres of timber lands, which will be developed. It is reported that a lumber plant of 150,000 feet capacity daily is now being erected. Probably De Witt C. Smith, president of Chesapeake & Western Railway, 141 Broadway, New York, or A. S. Weissiger, general agent at Harrisonburg, can give information.

Nelson—Flour Mill.—W. R. Blanks will erect a 25-barrel roller mill.

Norfolk—Water Mains.—City water department recommends the construction of a new water main of larger size from the pumping station to the city. Address H. L. Smith, superintendent.

Norfolk—Electric-lighting.—Norfolk Railyard & Light Co. contemplates extending its lighting facilities to Lambert's Point.

Norfolk—Brass and Iron Foundry.—J. A. Ridgwell and A. J. Hall have established brass and iron foundry at Madison and Water streets.

Pineville—Flour Mill.—E. J. Perry will erect a 25-barrel flour mill.

Phoebe—Ice Plant, etc.—Warwick Brewing & Ice Co. will, it is said, establish an ice plant and branch of its Newport News brewery at Phoebe.

Richmond—Planing Mill.—Jos. Heppert will rebuild his planing mill, burned at a loss of \$20,000.

Richmond—Hardware Company.—W. S. Donnan Company (established) has incorporated as the W. S. Donnan Hardware Co., with capital stock of \$100,000, by W. S. Donnan, president; John Donnan, vice-president; S. C. Donnan, Jr., secretary and treasurer.

Roanoke—Bag Factory.—W. A. Martin of East Bend, N. C., will remove his tobacco-bag factory to Roanoke.

Woodstock—Electric-light Plant.—Woodstock Electric Light Co. has awarded contract for the construction and equipment of lighting plant.

WEST VIRGINIA.

Clarksburg—Land Improvements.—W. Hunter Atha of Fairview and parties from Pennsylvania have optioned 165 acres of land near Clarksburg with a view to purchasing for developing as townsite, manufacturing location, etc.; steel and glass works are contemplated.

Clarksburg—Ice Factory.—W. E. Stathers, M. J. Bartlett, Frank Bland, C. W. Moore and C. H. Peck have incorporated Citizens' Ice Co., with capital stock of \$30,000, to build ice and cold-storage plant.

Clarksburg—Brewery.—R. H. Byers, J. H. Hustead and R. D. Byers of Pennsylvania contemplate erecting a \$100,000 brewery.

Clarksburg—Bottling Works and Cold Storage.—Wood-Hall Brewing and Bottling Association has been organized, with capital stock of \$50,000, to establish bottling works and cold-storage plant, main building to be 40x110 feet; will also establish plants throughout the State; D. A. Wood, president; John D. Hall, vice-president, and Carl Shiff, secretary.

Clarksburg—Tinplate Plant.—Jackson Iron & Tinplate Co., reported organized last week, will build plant with 110x400-foot main building, equipped with modern machinery. Geo. W. Barkman, Second National Bank Building, Hamilton, Ohio, is architect for buildings, and C. C. Moore, 39 Vine street, Hamilton, Ohio, can be addressed in reference to machinery.*

Grafton—Coal Lands.—Theo. Bush and associates have leased and will develop 10,000 acres of coal lands.

Kingwood—Coal Mines.—Wm. G. Brown, probably of Kingwood, and Williamsport (Pa.) capitalists have formed the Pennsylvania Smokeless Coal & Coke Co., with capital stock of \$300,000, for the development of coal mines in Preston county.

Point Pleasant—Coal Lands.—Pittsburgh (Pa.) parties have purchased 11,000 acres of coal lands in Boone county, and are interested in three lines of railroad projected along Coal river. James B. Menager of Point Pleasant can probably inform.

Thornton—Brick Works.—West Virginia

Fire-Clay Co. (F. S. Lee of Scottsdale, Pa., manager), will build brick works at Thornton.

BURNED.

Clarksville, Texas.—J. M. Mims' saw and planing mill; loss \$10,000.

Little Rock, Ark.—P. Kiech's heading factory; loss \$35,000.

Monticello, Ky.—Somerset Oil Co.'s office building, derrick and outbuildings; loss \$20,000.

New Lewisville, Ark.—Kress City Lumber Co.'s saw-mill; loss about \$30,000.

Richmond, Va.—Joseph Heppert's planing mill; loss \$15,000.

Union, S. C.—J. E. Squire Bottling Works.

West Point, Miss.—Evaporator building and machinery of A. M. Augustin.

Wheeling, W. Va.—Wheeling Traction Co.'s barns and power-house; loss \$50,000.

BUILDING NOTES.

Alexandria, La.—Courthouse.—J. Riely Gordon Co., Dallas, Texas, has revised and increased plans for Rapides parish courthouse at Alexandria, and bids will soon be asked; cost \$100,000.

Annapolis, Md.—Barracks.—Charles McCall Company of Philadelphia, Pa., has contract at \$119,850 for erection of the marine barracks at Annapolis. This does not include officers' quarters, for which new bids are asked.

Anniston, Ala.—Warehouse.—W. H. Zinn will erect warehouse 100x135 feet.

Baltimore, Md.—Hotel.—Paul Emmert has completed plans for remodeling 212 West Monument street for hotel purposes; cost of improvements will be \$25,000.

Baltimore, Md.—Bank Building.—Provident Savings Bank has purchased site and will erect bank building.

Baltimore, Md.—Warehouse.—Curlier & Mohler, manufacturers of plumbers' supplies, have had plans made for erection of a four-story warehouse.

Baltimore, Md.—Hospital.—Sealed proposals addressed to "Board of Awards," care of city register, will be opened July 24 for additions and alterations to hospital at the Baltimore city jail, reported last week. Certified check for \$350 must accompany each bid.

Baltimore, Md.—Warehouse.—The control of the Baltimore Warehouse Co., C. A. Foote, president, has been purchased by a syndicate, which intends to develop the business, erecting a large \$95,000 warehouse at Hanover and Lombard streets.

Baltimore, Md.—Office Building.—S. Gross Horwitz has ordered J. E. Sperry to prepare plans for 24x123-foot office building.

Baltimore, Md.—Store.—Chas. E. Cassell is preparing plans for three-story brick store and dwelling for Isador Noah.

Bay City, Texas—Warehouse.—Bay City Rice Milling Co., just formed by L. Marks of Crowley, La., and W. T. Goode of Kansas City, Mo., will build warehouse 64x208 feet.

Blackshear, Ga.—Cottonseed Warehouse.—A. P. Brantley Company has awarded contract to T. J. Darling of Waycross for erection of proposed cottonseed warehouse 75x180 feet.

Brunswick, Ga.—Hotels.—A hotel to cost \$5,000 is being built on St. Simons Island, to have artesian well, steam heat, electric plant, swimming pools, etc. The Oglethorpe Hotel, recently reported burned, will also be rebuilt at a cost of \$187,000. J. G. Conzelman is architect for both buildings.*

Cape Charles, Va.—Quarantine Buildings.—J. K. Taylor, supervising architect, Washington, D. C., will open bids August 8 for construction of buildings at United States quarantine station, Cape Charles, Fisherwoman's Island, in accordance with plans, which may be had of above or of "Medical Officer in Command" at Cape Charles.

Cedartown, Ga.—City Hall.—Trammell & McDuffie of Rome have contract for erecting city hall.

Cleburne, Texas—Church.—Bids will be opened July 31 for erection of brick-veneered church building for the M. E. Church, South.

Clayton, Ky.—Dwellings.—Home Investment Co. has purchased site at \$7000, and will erect two dwellings.

Lynchburg, Va.—Dwelling.—R. D. Apperson has let contract for erection of residence of stone and frame.

Macon, Ga.—City Hall Annex.—City will build a \$10,000 annex to the city hall, instead of the auditorium, previously mentioned. "The Mayor" will advertise for bids for erection of same.

Mesquite, Texas—School.—J. Riely Gordon Co., Dallas, Texas, has prepared plans for proposed school building at Mesquite, two stories, slate roof, furnace heat, plumbing, electric lights, etc.; cost \$20,000.

Mobile, Ala.—Dwelling.—Chas. M. Hero will erect \$3400 frame dwelling.

Morgantown, W. Va.—Business Blocks.—Aaron Garlow, John C. Price and Dr. J. J.

Dallas, Texas—Residence.—J. Riely Gordon Co. is preparing plans for residence for J. C. Conway; electric lights, mantels, plumbing, laundry, etc.

Davis, W. Va.—Residence.—Geo. Flack Samsbury of Cumberland, Md., has prepared plans for residence at Davis for Alfred Wilt.

Denison, Texas—Hotel.—J. Riely Gordon Co., Dallas, Texas, is preparing plans for \$100,000 hotel, four stories, brick, passenger and freight elevators, bar fixtures, office furniture, bakery, steam heat, electric lights, plumbing, etc. Messrs. Lingo, Foster and Platler are directors of hotel company.

Denton, Texas—School.—C. F. Witherspoon, president school board, will receive sealed proposals until July 24 for remodeling and building additions to school building. Plans and specifications can be seen at offices of J. Riely Gordon Co., Dallas; N. P. Anderson & Co., Fort Worth; Tom Lovell, Waco; Pittman & Harrison, Sherman, and C. F. Witherspoon, Denton. Usual rights reserved.

Dublin, Texas—School.—Sealed bids will be opened July 25 for erection of three-story school building. Plans at office of Howard Messer, architect, Fort Worth and Dublin.

El Paso, Texas—Hospital.—E. B. Cushing, engineer M. W., Southern Pacific Company, Houston, will open bids August 20 for erection of hospital building in El Paso. Plans, specifications and other information can be obtained from engineer or from W. R. Martin, division superintendent, El Paso.

Gainesville, Ga.—Dwelling.—S. R. Adams will erect dwelling.

Gainesville, Ga.—Store Building.—Alexander & Thomas will erect one-story brick store building.

Greenville, Ga.—Courthouse.—County has voted issuance of bonds to build a courthouse. Address "County Clerk."

Hollins, Va.—Dwelling.—N. B. Dillard will erect dwelling.

Huntington, W. Va.—Hotel.—Florentine Hotel will erect an addition and make other improvements.

Huntsville, Ala.—Church.—J. W. Golucke & Co. of Atlanta, Ga., have completed plans for proposed building for Third Presbyterian Church; structure will cost \$15,000.

Jackson, Tenn.—Opera-house.—Mr. Friedman has \$5000 subscribed for the proposed opera-house; plans will be prepared at once.

Jacksonville, Fla.—Church.—Jewish synagogue has accepted plans of J. H. W. Hawkins of New York for its proposed structure of pressed brick, with metal trimmings, etc.

Jacksonville, Fla.—Church.—Presbyterian congregation has accepted plans of Wilson & Edwards of Columbia, S. C., for proposed edifice previously noted; building will be of brick and stone, with slate roof.

Jacksonville, Fla.—School.—Stanton School will be rebuilt at a cost of \$11,000. Address "The Mayor."

Jacksonville, Fla.—Business Building.—E. E. Cleaveland will erect three-story brick, iron and plate-glass business building.

Johnson City, Tenn.—Home.—Competitive bids will be solicited for erection of proposed soldiers' home as soon as plans of J. H. Freelander of New York have been completed. Power-house will be erected first, and hospital, storehouse, barracks and smaller dwellings in order named. Address S. C. Williams.

Lake Charles, La.—Courthouse.—Plans of J. Riely Gordon Co., Dallas, Texas, have been accepted for proposed courthouse, brick and stone, fireproof, steam heat, hard plaster, marble work, electric lights, plumbing, sheet metal work, etc.; cost \$50,000.

Lexington, Ky.—Dwellings.—Home Investment Co. has purchased site at \$7000, and will erect two dwellings.

Lynchburg, Va.—Dwelling.—R. D. Apperson has let contract for erection of residence of stone and frame.

Lynchburg, Va.—Church.—Baptist Church Extension Society awarded contract to E. H. Coleman at \$2900 for erection of church building.

Macon, Ga.—City Hall Annex.—City will build a \$10,000 annex to the city hall, instead of the auditorium, previously mentioned. "The Mayor" will advertise for bids for erection of same.

Mesquite, Texas—School.—J. Riely Gordon Co., Dallas, Texas, has prepared plans for proposed school building at Mesquite, two stories, slate roof, furnace heat, plumbing, electric lights, etc.; cost \$20,000.

Mobile, Ala.—Dwelling.—Chas. M. Hero will erect \$3400 frame dwelling.

Morgantown, W. Va.—Business Blocks.—Aaron Garlow, John C. Price and Dr. J. J.

Hall have awarded contracts for erection of three large business blocks.

Nacogdoches, Texas.—Depot.—Texas & New Orleans Railroad Co. will build new depot; W. G. Van Vleck, manager, Houston, Texas.

Newport News, Va.—Dwelling.—Mrs. William T. Gatewood will erect large dwelling.

Newport News, Va.—Hospital.—Newport News General Hospital Association will at once readvertise for bids on erection of main building for hospital; estimated cost is \$12,000.

Newport News, Va.—Hall.—Thompson & Remington have contract at nearly \$5000 for erection of Elks' Hall.

Norfolk, Va.—Custom house Improvements. Lowest bidder for alterations and repairs to Norfolk custom-house was James F. Oliver of New York at \$13,445.

Olive, Texas.—Public Buildings.—Citizens will endeavor to secure erection of school building and city hall. Probably "Town Clerk" can inform.

Paris, Tenn.—City Hall.—W. C. Johnson, E. E. Davis and C. P. Hudson are a committee to receive plans and bids on city hall.

Paris, Texas.—Residence.—J. Riely Gordon Co. of Dallas is preparing plans for residence for R. F. Scott, two stories, buff brick, slate roof, electric bells, art glass, skylights, hot-water heat, hardwood interior finish, electric lights, plumbing, laundry fixtures, etc.; cost \$40,000.

Richmond, Va.—Church.—Howard's Grove Baptist Church, Rev. C. C. Cox, pastor, will build \$7000 edifice.

Rock Hill, S. C.—Hotel.—Walter & Legare of Columbia will prepare plans for remodeling the Carolina Hotel at Rock Hill.

Rutherfordton, N. C.—Hotel.—R. B. Clarke is reported as having purchased site for erection of \$8000 hotel.

San Antonio, Texas.—Library.—J. Riely Gordon Co. of Dallas is the architect and contractor has been awarded P. T. Shields at \$5,000 for erection of Carnegie Library building, lately mentioned.

Sanford, N. C.—Buildings.—Commercial Building Co. has been incorporated, with capital stock of \$15,000, by T. L. Chisholm, W. A. Monroe and others, for building houses, etc.

Sherman, Texas.—Residence.—J. Riely Gordon Co., Dallas, is preparing plans for residence for T. Randolph, two stories, buff brick, slate roof, electric equipment, hot-water heat, tile floors, laundry fixtures, plumbing, mantels, etc.; cost \$40,000.

Shreveport, La.—City will hold election to vote on issuance of \$70,000 of bonds for building new jail. Address "The Mayor."

Shreveport, La.—Jail.—J. Riely Gordon Co., architect, Dallas, Texas, has let contract to Sonnenfeld & Albright and the Stewart Iron Works Co. of Cincinnati for erection of proposed jail at Shreveport.

Sudbrook Park, Md.—Cottage.—C. E. Cassell of Baltimore is preparing plans for \$10,000 cottage at Sudbrook for William R. Miller.

Tampa, Fla.—Building.—W. T. Boyd will erect three-story brick building.

Vicksburg, Miss.—City Hall.—J. Riely Gordon Co. of Dallas, Texas, has postponed letting of contract for Vicksburg city hall until August 5.

Washington, D. C.—Dwellings.—Middaugh & Shannon will erect forty two-story houses.

Washington, D. C.—Storehouse.—Plans and specifications have been received by Secretary E. C. Hering of the Builders' Exchange for new storehouse for combustible materials to be erected at navy-yard. Bids are called for July 27; new building will be one-story, constructed of steel, with galvanized and corrugated steel roofing and sides.

Waycross, Ga.—Dwelling.—Dr. R. P. Izlar will erect residence after plans by George Feltham.

Wills Point, Texas.—School.—School board has accepted plans of J. Riely Gordon Co. of Dallas for brick high school, including electric lights, furnace heat, plumbing, etc.; cost \$35,000.

Wilmington, N. C.—Store Building.—R. R. Bellamy will rebuild his two-story store, adding two stories and making entire structure of brick.

Winchester, Va.—Hospital.—Directors of Winchester Memorial Hospital selected plans of C. B. Kerfostein of Washington, D. C., for new hospital building; cost of building, \$14,000.

To Lumbermen.—An opportunity to purchase 25,000 acres of timber land at a very low price is offered in another column. J. J. McCaskill & Co. of Freeport, Fla., will give further particulars.

RAILROAD CONSTRUCTION

Railways.

Ashdown, Ark.—F. W. Vallant, chief engineer of the Arkansas & Choctaw Railroad Co., states that the line is now in operation between Ashdown and Arkinda, a distance of twenty-five miles, and that it will be extended during the next eighteen months to Wichita Falls, Texas, connecting with the Fort Worth & Denver Railroad at Wichita Falls. It is stated that surveys have been completed, and that it is expected to let contracts next month.

Beattyville, Ky.—It is announced that a contract has been let to Messrs. Mason, Hoge & Co. to construct the extension of the Louisville & Atlantic Railroad from Miller's Creek, the present terminus, to Beattyville, an estimated distance of eighteen miles. J. P. Amsden at Versailles, Ky., is president of the company.

Bessemer, Ala.—Robert Jemison of Birmingham, president of the Birmingham Consolidated Railway, Light & Power Co., states that it is expected to have the branch to Bessemer completed for the use of electric motors within the next sixty days. It is also stated that the company may complete a route between Bessemer and East Lake, La.

Bloomfield, Mo.—It is announced that an extension of the Cape Girardeau, Bloomfield & Southern Railroad will be built to Morehouse, Mo. The estimated length of the extension is fourteen miles. E. Sebastian at Bloomfield is superintendent.

Charleston, S. C.—The report that the Louisville & Nashville Railroad Co. may utilize Charleston as a terminus on the Atlantic seaboard has been revived. It is reported that the arrangements are being made to construct an extension which will connect with some line entering Charleston. R. Montfort at Louisville, Ky., is chief engineer.

Crowley, La.—The plan to build a railroad between Crowley and New Iberia has resulted in the formation of a temporary organization to promote it. J. B. Lawton and R. S. McMahon of New Iberia are among those interested.

Danville, Ark.—P. A. Douglas, one of the promoters of the Danville, Fourche Valley & Southern Railroad, writes the Manufacturers' Record that it will be fifteen miles in length and standard gauge. Contracts will probably be let in the near future and bonds will be issued to finance the undertaking. The company will require rails and rolling stock.

Douglas, Ga.—Arrangements have been made to begin work upon the railroad between Douglas and the Ocmulgee river immediately. The promoting company includes D. G. Purse of Savannah.

Draughton, Ark.—Work is in progress upon the Saline River Railroad between Draughton and New Edinburg, Ark., and it is expected to complete the road by September 1. It will be eight miles in length. C. J. Carter at Kansas City, Mo., is president of the company.

Fulton, Ky.—The Chesapeake & Ohio Railway Co. is constructing a yard at Fulton, which will comprise several miles of track. H. Pierce at Huntington, W. Va., is engineer.

Georgetown, Ky.—Younger Alexander of Brooksville, Ky., president of the Georgetown & Lexington Traction Co., informs the Manufacturers' Record that the estimated distance between these towns is twelve miles. The necessary franchises and rights of way have been secured, and surveys have been made. The power station will be located at Georgetown, and the company is in the market for the necessary equipment.

The Bluegrass Traction Co. has been formed to build between Paris and Lexington, and expects to construct the road as soon as the Georgetown & Lexington line is completed. It is proposed to issue \$250,000 in bonds on the Georgetown & Lexington route.

Harrisonburg, Va.—It is reported that surveys are now being made in the interest of the Central Railroad of Virginia between Harrisonburg and Durbin, W. Va. C. A. Chapman is reported as engineer.

Hopkinsville, Ky.—W. M. Fuqua, one of the promoters of the Western Kentucky Coal, Coke & Railroad Co., writes the Manufacturers' Record that the company expects to construct fifty miles of line, and that contracts will be let as soon as securities are floated. Engineers have made examinations and estimates, and have reported favorably upon the project. The line will be built between Madisonville, Ky., and Dawson Springs.

Jefferson, Texas.—It is reported that arrangements are being made to extend the

Jefferson & Northwestern Railroad to Naples, Texas, a total distance of thirty miles. P. S. Clark at Jefferson is vice-president of the company.

Johnson City, Tenn.—President Samuel Hunt of the Ohio River & Charleston Railroad states that estimates are being made of the cost of repairing the section of its line recently damaged by floods. About ten miles of track and bridges were totally destroyed. It is understood that contracts will be let for rebuilding it as soon as the necessary data is secured. A. N. Molesworth at Johnson City is engineer.

Kentwood, La.—Construction is in progress upon the Kentwood & Eastern Railroad, projected between Kentwood and Columbia, Miss., an estimated distance of sixty miles. E. B. Preston at Kentwood is superintendent.

Louisville, Ky.—It is reported that the Louisville, Anchorage & Pewee Valley Electric Railway Co. has made arrangements to float an issue of \$18,000,000 in 5 per cent. bonds to build its system in the vicinity of Louisville. A portion of the right of way has already been secured. Percy Moore at Louisville is one of the principal promoters.

Marion, N. C.—The Marion & Northwestern Railroad Co. has been chartered in North Carolina, with \$3,000,000 capital stock, to build a railroad from Marion to a point in Eastern Tennessee. W. C. Perkins at Boston is president of the company, and L. D. Heart of Durham, N. C., treasurer.

Marshall, Texas.—It is announced that the Texas Southern Railway Co. has let a contract to Craven & Co. of Harleton, Texas, to grade five miles of extension between Harleton and Asbury. The Texas Southern is under construction between Marshall and Gilmer, Texas, a distance of thirty-five miles. S. P. Jones at Marshall is general manager.

Monroe, N. C.—Tracklaying is in progress upon the Charlotte, Monroe & Columbia Railroad, under construction between Monroe and McBee, a distance of forty-three miles. About twelve miles of track have been completed. William Moncure at Raleigh, N. C., is president of the company.

Natchez, Miss.—The estimated length of the proposed railroad between Natchez and Gulfport is 165 miles. It is being promoted by S. S. Bullis, formerly general manager of the Gulf & Ship Island Railroad, also W. H. Hardy. Examinations of the route have already been made.

Natchez, Miss.—The Bluff City Railway Co. has been organized, with \$110,000 capital stock, to build a railroad for hauling freight on several of the city streets. S. E. Rumble and N. Carpenter are among those interested.

New Decatur, Ala.—It is reported that the parties who have revived the Helena, Tupelo & Decatur Railroad project expect to secure rights of way in the near future for the section of the line in Alabama. The road is proposed from Helena, Ark., to Sardis, Miss., and Tupelo, in the same State. It will traverse an extensive timber territory.

Newport News, Va.—The property referred to in the Manufacturers' Record recently as being sold for railroad terminals, it is stated, has been bought by a syndicate in the interest of George J. Gould. It is located on the James river, near its mouth. According to the report, a road will be built from Richmond to the James river.

Norfield, Miss.—It is stated that an extension of about eleven miles is being made to the Natchez, Columbia & Mobile Railroad, which will terminate at Monticello. R. B. Butterfield at Norfield is manager of the company.

Ocilla, Ga.—J. W. Pope, president of the Hawkinsville & Florida Southern Railway Co., in a letter to the Manufacturers' Record writes that an extension of its line to Ocilla is under consideration, but that no decision has as yet been reached.

Pine Bluff, Ark.—G. L. Morris, manager of the Pine Bluff & Arkansas River Railroad, writes the Manufacturers' Record that the necessary contracts have been let for the extension of six miles and it is now under construction. Rails have also been purchased.

Poplar Bluff, Ark.—Newman Erb, president of the Southern Missouri & Arkansas Railroad Co., confirms the report in the Manufacturers' Record that surveys are being made for an extension between Poplar Bluff and Pocahontas, Ark., and that it is expected to let contracts for this work within the next thirty days. The length of this extension is fifty-two miles. Mr. Erb's address is 66 Broadway, New York.

Ruston, La.—A correspondent of the Manufacturers' Record writes that surveys have been made for the Hamburg, Ruston &

Southern Railroad between Ruston and Farmerville, La., a distance of twenty-five miles, and right of way is now being secured. W. Jackson is general manager, and W. F. Cooper, chief engineer. Their headquarters are at Ruston.

Sistersville, W. Va.—The plan to build a railroad between Sistersville and Tyler has been revived, and another survey may be made of the route in the near future.

Tazewell, Tenn.—It is reported that surveys are now being completed between Tazewell and St. Paul, Va., an estimated distance of 100 miles, in the interest of the Powell's Mountain Mineral Railway. J. M. Jarvis at Sneedville, Tenn., is president of the company.

Vicksburg, Miss.—The Vicksburg & Southwestern Railroad Co. has been chartered to build between Vicksburg and Hattiesburg, a distance of 110 miles. Among those reported as interested are W. L. Wells and W. H. Fitzhugh at Vicksburg.

Vicksburg, Miss.—The Vicksburg & Hattiesburg Railroad Co. has been organized to complete a route from Vicksburg to a connection with the Mobile, Jackson & Kansas City Railroad, connecting Vicksburg and Mobile. P. M. Harding of Vicksburg has been elected president; W. J. Ferguson of Utica, N. Y., and J. M. Ellis of Hazelhurst, Miss., vice-presidents; W. S. Jones of Vicksburg, treasurer, and W. H. Fitzhugh, secretary. The company is capitalized at \$1,250,000, and it is stated surveys will be made immediately. Contracts have been let for the extension of the Mobile, Jackson & Kansas City Railroad to Hattiesburg, and the Vicksburg Company will confine its operations to the portion between Vicksburg and Hattiesburg, an estimated distance of 115 miles.

Westlake, Fla.—P. E. West, president of the Ellaville, Westlake & Jennings Railroad, writes the Manufacturers' Record that it is expected to complete the extension of ten miles if the necessary labor can be procured.

Street Railways.

Asheville, N. C.—The work of constructing the electric railroad between Asheville and Weaverville has begun and it is to be completed as soon as possible. L. B. Wilford of Asheville is one of the promoters.

Chattanooga, Tenn.—The Chattanooga Electric Railway Co. has given a deed of trust to the Chattanooga Savings Bank to secure a bond issue to the extent of \$375,000. It is stated that a portion of the issue will be used to finance the extension to Sherman Heights, which is to be built immediately.

Richmond, Va.—It is reported that the Richmond Passenger & Power Co. will construct several miles of additional track in the city to form a loop through a portion of the suburbs.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Advertising Specialties.—Eucaline Medicine Co., Station A, Dallas, Texas, will buy cartons, signs and other advertising specialties.

Automobile Specialties.—Day Automobile Co., 1407 East Twelfth street, Kansas City, Mo., needs double-acting hand pumps for pumping air on steam carriages, steam injectors for injecting water into boilers with one-eighth and one-quarter-inch connections; also steam pump for steam carriages, running gears and machinery for delivery wagons.

Boiler.—W. H. Gibbes & Co., Columbia, S. C., want a 100-horse-power tubular boiler (horizontal), either half or full front, complete with all fittings, stack and guy wire; also with or without small fixtures. Parties quoting give full particulars, stating point of shipment.

Boiler.—Seward Trunk & Bag Co., Petersburg, Va., is in the market for 60 to 80-horse-power boiler, new or second-hand.

Boilers.—See "Tinplate Plant."

Boilers.—Rumsey Pump & Machine Co., 35

Dey street, New York, N. Y., wants two second-hand economic boilers, combined capacity eighty horse-power, neither less than twenty horse-power.

Boilers and Engine.—Carolina Mineral Co., Geo. E. Brightson, president, Marshall, N. C., wants propositions on one 100-horse-power boiler, one 75-horse-power engine complete, also one 10-horse-power portable boiler; New York office is 140 Malden Lane.

Boiler Specialties.—Belton Gin & Cotton Co., Belton, Texas, wants to buy a heater.

Brick Machinery.—See "Saw-mills, etc."

Building Equipment.—J. G. Conzelman, architect, Brunswick, Ga., wants to hear from contractors for steam heat and general hotel fixtures, etc.

Carousel.—Graham Bros., Gainesville, Fla., is in the market for a steam "merry-go-round."

Cement Machinery.—Muscogee Coal Co., W. L. Doane, president, Birmingham, Ala., desires communications from parties building machinery for Portland and hydraulic cement plants.

Coaling Plant.—M. T. Endicott, chief of yards and docks, Washington, D. C., will open bids August 31 for constructing and installing two coal-hoisting towers and coal-handling machinery at naval station, San Juan, P. R. For specifications and blank forms address chief named or "Commandant of Naval Station" at San Juan.

Conveying Machinery.—See "Coaling Plant."

Conveying Machinery.—See "Tinplate Plant."

Crane.—See "Saw-mills, etc."

Crematory.—J. K. Taylor, supervising architect, Treasury Department, Washington, D. C., will open proposals August 9 for crematory at Cape Charles quarantine station, Fisherman's Island, Va., in accordance with drawings and specifications furnished on application to architect or to custodian of station, Fort Monroe, Va.

Derrick.—Fogle Bros., Winston-Salem, N. C., are in the market for portable derrick or hoist, to be used in heavy mill construction for setting up columns and girders; must lift 200 to 250 pounds eighteen feet from floor and be on wheels.

Drying Equipment.—See "Grinding Machinery."

Electric-light Plant.—"Mayor and Aldermen" of Roanoke, Ala., will open bids August 1 for furnishing materials and constructing combined water-works and electric-lighting system. Drawings and specifications on file with "City Clerk" and with Thos. V. Hall, consulting engineer, West Point, Miss. Appropriations are \$35,000. (See adv. in Manufacturers' Record.)

Electric Plant.—J. R. Knight, Franklin, Va., wants to correspond with manufacturers of electric-light and water-works machinery.

Electric Plant.—See "Railway Construction and Equipment."

Engine.—Houma (La.) Fish & Oyster Co., Limited, desires to purchase a 15-horse-power gasoline engine (marine).

Fiber Machinery.—A. F. Crawford, Midway, Fla., wants to correspond with makers of machinery for reducing pine needles or "pine straw" to fiber.

Filter.—West End Electric Park Co., Andrew Pizzini, Jr., president, Richmond, Va., wants filter guaranteed for 300,000 gallons of water per day.

Foundry Equipment.—See "Machine Tools."

Grinding Machinery.—Virginia Hardware Co., 430 Main street, Danville, Va., wants prices delivered at Danville on machinery for grinding salt and charcoal as fine as flour, with bolter attached and dryer for same, capacity to be 5000 pounds daily; also wants statement of size of engine required to operate plant.

Hunting Plant.—See "Building Equipment."

Heating Plant.—West End Electric Park Co., Andrew Pizzini, Jr., president, Richmond, Va., will want in the near future a steam heating plant for buildings.

Hoisting and Conveying Machinery.—See "Crane."

Ice Plant.—S. A. Cawthon, De Funik Springs, Fla., wants prices on ice and refrigerating machinery.

Laundry Machinery.—Charles H. Welch, Aberdeen, Miss., wants to correspond with manufacturers of steam-laundry machinery.

Machine Tools.—Cardwell Machine Co., 1900 East Cary street, Richmond, Va., wants catalogues and prices on 24-inch by 12-foot lathe, radial drill with six-foot arm, planer about 48 inches by 10 feet or 36 inches upon side, and a 1000-pound hammer.

Mattress Machinery.—J. A. Riviere, Americus, Ga., wants to purchase machine for preparing pin straw for mattresses, etc.; also mattress machinery.

Oil-fuel Apparatus.—Geo. A. Patterson, chairman light and water committee, Alexandria, La., will open bids July 25 for furnishing and installing apparatus for burning oil as fuel. Address for plans, etc.

Oil Mills.—F. S. Royster Guano Co., Norfork, Va., wants proposals to construct two cottonseed-oil mills complete.

Plumbing Supplies.—Ewart & Son, Ltd., 346 Euston Road, London, N. W., England, request catalogues and price-lists on sanitary appliances of all kinds, bathroom fittings, water heaters, plumbers' supplies, ironmongers' supplies, etc.

Pumps, etc.—See "Automobile Specialties."

Railway Construction and Equipment.—Georgetown & Lexington Traction Co., care Younger Alexander, Brooksville, Ky., is in the market for rails and electrical supplies for 12-mile railway; also wants to correspond with contractors relative to construction.

Railway Equipment.—See "Saw-mills, etc."

Railway Equipment.—T. J. James, president, Wadley & Mt. Vernon Railroad, Mt. Vernon, Ga., will want iron and rolling stock for proposed extension.

Railway Equipment.—Wanted—Relaying rails for 100 miles of standard-gauge road, 50 to 60 pounds weight, together with all splices, bolts and frogs. Quote lowest delivered prices Texas common points. Address A. B. C., care Manufacturers' Record.

Refrigerating Compressor.—John A. Waters & Co., Richmond, Va., are in the market for a 20 or 25-ton belt-driven refrigerating compressor and outfit for immediate delivery.

Salt Plant.—Palestine Coal & Mining Co., Palestine, Texas, wants bids for construction of 500-barrel and a 1000-barrel per day capacity salt-making plant, with plans, specifications and blueprints.

Saw-mill.—L. F. Willis, Welchville, Maine, wants to purchase a wood-sawing and splitting machine.

Saw-mill.—L. R. T. Dixon, Pocono City, Md., wants sawing machine with railway carriage for cutting hardwood in round logs and up to two feet; second-hand preferred.

Saw-mills, etc.—South African Trading Co., Copenhagen, Denmark, wants prices delivered at Port Natal, Africa, (and weights of each plant) on the following: Circular mill for cutting deals flat and deep three inches to four inches by nine inches to twelve inches, band saw for logs (especially tenk) up to thirty inches, turning machine for rails, balusters, etc., planer for same, molder for molding 1½, 2, 3, 4, 5, 6, 7 inches and 9 inches, also dynamo or boiler for this machinery; plant for household and toilet soaps, with boiler or dynamo, full detailed description being asked; tobacco factory, including leaf cutters (1500 pounds capacity daily), drying, fermenting and packing machinery, with boiler or dynamo; decorated tins for tobacco, one-quarter, one-half and one pound, square and round, price per gross, samples if possible; plant for 1,000,000 common bricks daily, with boiler or dynamo; crane or other equipment for lifting logs up to five tons in weight, installed in shed, to carry 150 feet on rails, sixteen feet above ground; about 130 feet of narrow-gauge track readily removed and laid, and two small cars. Full particular wanted as to space required and approximate consumption of coal or electricity.

Sea-wall Construction.—Wm. Thompson, treasurer National Soldiers' Home, Virginia, will open bids August 20 for repairs to breakwater and construction of sea wall. Plans, specifications, etc., on file and blank forms furnished on application.

Sewerage System.—E. M. Kearney, city secretary of Sherman, Texas, will open bids August 5 for construction of sanitary sewers after plans and specifications, etc., copies of which may be obtained from city secretary or from John W. Maxey, consulting engineer, Houston. Certified check for \$4000 will be required from successful bidder.

Sewer Work.—Shreveport Water-Works Co., Shreveport, La., will receive proposals until August 2 for constructing all or a part of approximately four and one-half miles of sewer from eight to eighteen inches in diameter. Plans and specifications may be seen and specifications, form of contract, bond and bid obtained at office of W. S. Kuhn, general manager, 1200 Bank for Savings Building, Pittsburgh, Pa., or at office of water-works company. Certified check for \$500 must accompany each bid. Bond required and usual rights reserved.

Soap Machinery. See "Saw-mills, etc."

Tinplate Plant.—Jackson Iron & Tinplate

Co. of Clarksburg, W. Va., is ready to receive catalogues and price-lists on electric cranes, light plant, two 800-horse-power boilers, one 350-horse-power boiler and general mill machinery.

Tobacco Machinery.—See "Saw-mills, etc."

Wagon Machinery, etc.—See "Automobile Specialties."

Washboard Machinery.—J. N. Payne, Morganton, N. C., wants prices on machinery for making washboards.

Water-works.—See "Electric Plant."

Water-works.—See "Electric-light Plant."

Well-drilling.—Petit Jean Coal, Gas & Oil Co., Magazine, Ark., wants bids on sinking wells by contract.

Well-drilling.—John Simpson, quartermaster, San Antonio, Texas, will open bids July 31 for sinking artesian well at Fort Ringgold. Information and blank forms furnished to applicants.

Well-drilling.—Bids will be received until August 1 for drilling artesian well at Starke, Fla. Specifications may be obtained from E. P. Duncan, secretary at Starke, or Collier & Brown, engineers, Atlanta, Ga.

Well-drilling Machinery.—Excelsior Oil & Mining Co., W. H. Jones, president, Moberly, Mo., is in the market for drilling machinery.

Windmill.—S. B. Kinord, Jackson, Ga., wants to purchase windmill.

Woodworking Machinery.—See "Washboard Machinery."

Woodworking Machinery.—C. L. Goodman, Orange, Texas, wants names of box-machinery manufacturers.

TRADE NOTES.

From Texas to the Great Lakes.—Recent orders secured by the Ball Engine Co. of Erie, Pa., are from the State Lunatic Asylum at Austin, Texas, where 185 horse-power will be used; also for the Bush Building at Chicago, where 200 horse-power will be used. The engines will be direct-connected to electric generators.

Up in the Thousands.—Orders being received by the New Process Raw Hide Co. of Syracuse, N. Y., indicate the favor with which its product is received. One order, which amounted to over \$2000, is to be filled for ten pairs of gear wheels, the larger to be of cut cast iron and the smaller of New Process rawhide, making a noiseless combination. The rawhide pinions run from six and three-quarters to sixteen inches in diameter.

Southern Skill and Material.—The union depot to be constructed at Columbia, S. C., will not only be built of Southern material, but represent the skilled labor of the South. Messrs. W. H. Gibbes & Co. of Columbia will install the heating apparatus, which will be of a very elaborate character. Messrs. Gibbes & Co. have made arrangements to contract for heating and ventilating systems, and carry a large stock of this material.

From Far-Away Africa.—A letter was recently received by the Carolina Portland Cement Co. of Charleston asking for quotations. The letter came from Messrs. Heron Bros. of Cape Town, South Africa. This indicates the interest manifested abroad in American products, also the prominence which the South has assumed in exports. The Carolina Company has been in business but fourteen months, yet has a very large trade in the Southern States.

A Growing Business.—The plant of the H. Stevens' Sons Company of Macon, Ga., is being enlarged by the construction of an annex 60x200 feet and three stories high. It will be built of brick and equipped with the latest machinery for the manufacture of sewer pipe, chimney tops and other specialties for which this company has acquired such a wide reputation. The present factory represents 92,000 square feet, not counting the clay sheds and storage-room.

A Large Tow.—The business of towing coal and other products to Cuba in barges promises to assume large dimensions, as the problem of towing barges a long distance by high-powered towboats has been simplified by steam-towing machinery, such as the Shaw & Splegle patents, which are now very extensively in use both on the Atlantic and Gulf coasts and the Great Lakes. This apparatus is manufactured by the American Ship Windlass Co. of Providence, R. I.

A Model System.—Although the Boston Elevated Railway system has been in operation but a few weeks, it is so well managed and equipped that its patronage is extremely large. The power used for the motors is

the Sprague Multiple-Unit System installed by the Sprague Electric Co. of 527-531 West Thirty-fourth street, New York. The railway company is so pleased with the working of the Sprague mechanism that it has given the company a contract to furnish fifty additional multiple-unit equipments.

Sturtevant Company's Plant.—The plans of the B. F. Sturtevant Co., so far as perfected for its new plant at Hyde Park, Mass., contemplate an engine and electrical shop of gallery type 120x400 feet, two buildings each 80x400 feet, and three stories high, for blowers, heaters, forges, galvanized-iron work, exhaust heads, etc., and a foundry 120x400 feet. In addition, independent office, power and pattern storage buildings are planned for. Fireproof or slow-burning construction will be the rule throughout, and the fire risk reduced to an absolute minimum.

An Extensive Water-Power.—The Brownville Board Co. of Brownville, N. Y., has determined to develop extensive water-power. It has decided to install a water-wheel outfit, and has given a contract to the Stillwell-Bierce & Smith-Valley Co. of Dayton, Ohio. An idea of the extent of the work can be gained when it is stated that four pairs of 33-inch Cylinder-Gate Victor Turbines will be placed in position. Each pair under twenty feet working head will develop 400 horse-power. The wheels will be set in an open stone flume. The contract also includes draught tubes, as well as wall plates for stuffing-boxes.

Protection in the Far South.—The Baldwin-Ziegler Polar Expedition, which is now on its way to the North Pole, is probably the best-equipped expedition of the kind which has ever been launched in search of this goal. For the construction of shelters the explorers decided to take a supply of Ruberoid roofing made by the Standard Paint Co., 100 William street, New York. This material was decided upon for the reason that it is windproof and waterproof, and at the same time extremely light and convenient to carry. At various stations along the route huts of this material will be erected to be used as shelters and storehouses for supplies.

Crowded With Work.—This is the very satisfactory state of affairs of the Gardner Governor Co. of Quincy, Ill. It is not surprising, however, when the reputation which the company has for its specialties is considered. Its governors, pumps and air compressors are noted for the uniform satisfaction which they give wherever installed, and it may be said in this instance that the customers are perhaps the best advertisers. New machinery is being added to the Quincy plant, as it is absolutely necessary to handle the increase in trade. Letters to the Gardner Company show that the compressors especially have made a record in which the manufacturers can take a pardonable pride.

TRADE LITERATURE.

Right to the Point.—The stock list recently issued by Messrs. Wickes Bros. of Pittsburg, Pa., is so compact that it can be carried in the vest pocket, but the information it contains is right to the point and what every manufacturer should know. The machinery offered for sale includes about everything from a boiler to an iron kettle, and new as well as second-hand material.

Handy to Have Around.—The Frank S. De Ronde Co., 46 Cliff street, New York, is nothing if not unique in design of its "trade catchers." The latest idea is printed in red, yellow and black, and contains a design showing the benefit of the telephone in delivering orders to this company for its celebrated Lythite and other paints. It is prepared to fill orders not only fast, but "quick."

Should Be Above All.—At the top is the proper position for the roofing material manufactured by the Trinidad Asphalt Manufacturing Co. of St. Louis, for it has become very favorably and widely known for "putting a top" on things. The company's latest catalogue gives an idea of the varieties of roofing, as well as its asphalt paint and paving cement. Incidentally, the book contains many pages of testimonials from prominent patrons.

Falcon Coal.—An illustrated pamphlet has recently been issued by the Messrs. W. F. Jacoby & Co., 929 Stephen Girard Building, Philadelphia, which contains an analysis of the celebrated Falcon coal placed on the market by this company. The analysis shows 69.35 per cent. of fixed carbon, less than 1 per cent. of sulphur, and less than 5 per cent. of ash. Perhaps a better indi-

cation of its value, however, is the wide demand for it not only for domestic, but export purposes.

To Engineers and Miners.—Sheets Nos. 13 and 14, issued by the Jeanesville Iron Works Co. of Jeanesville, Pa., and Denver, Col., should be in the hands of engineers and miners especially, as they describe the pumping station manufactured by this company, also its centrally packed pumps. Apparatus bearing the stamp of the Jeanesville Company is especially noted for the small amount of space required for installation, its durability and power. A variety of sizes are manufactured suitable for large and small operations.

Has Come to Stay.—A late number of a little publication issued by the Associated Expanded Metal Companies indicates that their product has found much favor in the construction of factories and other buildings. The photographs which it contains are perhaps the best proof. One of them shows the car-repair shop of the Dunmore Iron & Steel Co., recently erected at Dunmore, Pa. It is entirely fireproof, and is one of nine buildings. Views of the exterior as well as the interior show at a glance the superiority of this form of construction.

Splicing That Is Splicing.—A book recently published by the John A. Roebling's Sons Co. of Trenton, N. J., gives an idea of the really wonderful progress which has been made in wire work. It is a fact that wire ropes of different sizes can be as neatly and strongly spliced as those made of hemp or other softer material. The book contains explicit directions for joining strands of cables, as well as smaller sizes, but what is more to the point, it is illustrated with photographs which give an exact idea of the different processes. Incidentally, some of the standard sizes of the Roebling cables and hawsers are illustrated and described, as well as the necessary splicing tools.

Things Rubber.—The Boston Belting Co. has been so long associated with anything that has rubber in it that it is hardly necessary to say anything further. Three catalogues recently issued by the corporation, however, cannot be passed by without reference, on account of the artistic manner in which they are printed, illustrated, and the amount of valuable information they contain. One tells the manufacturer exactly what he wants in the way of rubber belting and makes suggestions about the transmission of power; another refers to the rubber-covered rollers which have become so popular in the manufacture of textiles, paper, leather and other products, while the third refers to that much-discussed fabric, tire hose. The many orders received by the company from cities throughout the United States form the best proof of the quality of its work.

Everything for the Cigar Box.—The ordinary cigar box appears to be a very simple affair, but after looking over the catalogue recently issued by L. F. Grammes & Sons of Allentown, Pa., a very different idea will be gained. This firm prides itself on furnishing everything from nails to paint, and the catalogue in question contains no less than 120 half-tone illustrations of supplies required for boxmakers. The number of essentials is really wonderful, considering the apparent simplicity of the ordinary cigar box. Some of the stock of Messrs. Grammes & Sons include the necessary tools, box openers, hinges, saws for box lumber, oil, paint, glue, while one department conducted is devoted to designing and engraving labels of a high order. The catalogue is copyrighted, as it deserves to be, for it is a work of art from beginning to end in typography, illustrations, binding and general arrangement.

Pennsylvania Railroad Special Excursions to Pan-American Exposition.

The Pennsylvania Railroad Company will run special excursions to Buffalo on account of the Pan-American Exposition from Washington, Baltimore and adjoining territory on July 23, 31, August 6, 15, 21, 27, September 5, 11, 17 and 26. Round-trip tickets, good going only on train leaving Washington 7.50 and Baltimore 8.50 A. M., and on local trains connecting therewith, and good to return on regular trains within seven days, including day of excursion, will be sold at rate of \$10.00 from Baltimore and Washington, and proportionate rates from other points. Tickets will be good for passage in parlor cars going and sleeping cars returning on payment of usual Pullman rates. For specific time and rates consult local ticket agents.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

W. H. Shepherd and others have organized the Jasper County Investment Co. at Carthage, Mo., with \$20,000 capital stock.

The People's Insurance & Realty Co. has been organized at Lexington, Miss., by J. S. Eggleston, Morris Lewis and others.

William Jefferies is interested in the proposed bank at Jonesville, S. C. If organized the bank will be capitalized at \$25,000.

John Carter has been elected president, and H. C. Shirley, cashier, of the bank recently organized at Liberty, S. C., with \$25,000 capital stock.

A charter has been issued to the People's Savings Bank, recently formed at Yazoo City, Miss., by R. S. Wheless and others. It is capitalized at \$20,000.

The Davis National Bank has been organized at Seymour, Texas, with \$50,000 capital stock. Oscar E. Love has been elected president, and Robert E. Folkes, cashier.

August W. Smith has been elected president; W. W. Simpson, vice-president, and J. R. Westmoreland, cashier, of the bank recently organized at Woodruff, S. C., with \$50,000 capital stock.

The Citizens' Bank, recently organized at Alberton, Ga., has purchased the building for this use, and expects to begin business on September 1. M. Arnold and L. M. Heard are among the promoters of the institution.

New Securities.

Duke M. Farson has purchased \$25,000 in 6 per cent. bonds of Simpson county, Mississippi.

The Bank of Easley, Ala., has decided to increase its capital stock from \$50,000 to \$100,000.

S. A. Kean of Chicago has purchased the issue of \$76,000 of 3½ per cent. bonds of Martinsburg, W. Va., paying a premium of \$760.

Bids will be received until August 5 for the issue of \$75,000 in 4 per cent. bonds of Montgomery, Ala., by R. H. Sommerville, city treasurer.

Messrs. Seasongood & Mayer of Cincinnati have purchased the issue of \$30,000 in 4½ per cent. bonds of Humboldt, Tenn., paying 101 and interest.

The town of Will's Point, Texas, will probably place on the market in the near future an issue of \$12,000 in improvement bonds. The town clerk may be addressed.

Bids will be received until July 30 for an issue of \$250,000 in 3½ per cent. bonds of Buchanan county, Missouri. N. D. Goff, county treasurer, may be addressed at St. Joseph.

It is announced that bids will be received until August 3 for the issue of \$115,000 in improvement bonds of the city of Beaumont, Texas. A. Wheat, mayor, may be addressed.

The city council of Jacksonville, Fla., has voted in favor of the proposed issue of \$400,000 in bonds. The issue will be used for various purposes. The mayor may be addressed.

Messrs. W. J. Hays & Sons of Cleveland, Ohio, have purchased the issue of \$50,000 in bonds of New Hanover county, North Carolina, at par. The bonds bear 4 per cent. interest.

A. H. Boyden, mayor, may be addressed for thirty days from July 5 relative to

the issue of \$10,000 of 5 per cent. bonds of Salisbury, N. C. Bids will be received until the date mentioned.

Proposals will be received until September 2 by the commissioners of Scotland county, North Carolina, for an issue of \$30,000 in 6 per cent. improvement bonds. The commissioners may be addressed at Laurinburg, N. C.

The stockholders of the Consolidated Birmingham Railway, Light & Power Co. of Birmingham, Ala., have authorized the directors to issue \$6,000,000 in 5 per cent. bonds, of which \$5,000,000 will be distributed at once, the balance being reserved for improvements and other purposes.

The Macon, Dublin & Savannah Railway Co. has given a mortgage in favor of the American Trust and Savings Bank of Chicago to secure an issue of \$1,500,000 in 5 per cent. bonds. The securities were issued for the purpose of financing the extension of the line now under construction.

The State of Maryland has purchased the issue of \$200,000 in 3 per cent. improvement bonds for its sinking fund. All bids were rejected, although one was made by Messrs. Sperry, Jones & Co. of Baltimore of 102.67 for the entire issue. This is said to be the highest price ever offered for State bonds bearing 3 per cent. interest and running nine years.

The Lexington Railway Co. of Lexington, Ky., in which Baltimoreans are largely interested, shows handsome gains in earnings for each of the five months of the calendar year to May 31. Figures just received for the five months are as follows:

	1901.	1900.	Increase.
Gross earnings.....	\$77,547	\$62,736	\$14,811
Operating expenses.....	53,160	46,788	6,372
Net earnings.....	\$24,386	\$15,948	\$8,439

—Baltimore News.

The success of this company is due not simply to the advantages of Lexington as a street-railway town, but to the character of the management. When the present company, organized by John L. Williams & Sons of Richmond and Middleburg, Oliver & Co. of Baltimore, was formed, the property was first put in the best physical condition, and then so managed as to provide the very best facilities for the public. It was a case in which a semi-public corporation recognized that the public deserved the best treatment which could be devised, and the natural result has been a very remarkable success. In Norfolk the same policy has been pursued by the street-railway and light company organized by the same people and with similar results. There is a lesson in these cases which the managers of all corporations should heed.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending July 23.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	90	90
Aiken Mfg. Co. (S. C.).....	90	93½
American Spinning Co. (S. C.).....	103	103
Anderson Cotton Mills (S. C.).....	125½	125½
Arkwright Mills (S. C.).....	120	120
Augusta Factory (Ga.).....	80%	80%
Avondale Mills (Ala.).....	82½	82½
Bolton Mills (S. C.).....	103½	103½
Bennettsville Mfg. Co. (S. C.).....	100	100
Cabarrus Cotton Mills (N. C.).....	115	115
Clifton Mfg. Co. (S. C.).....	175	175
Clinton Cotton Mills (S. C.).....	121	121
Courtenay Mfg. Co. (S. C.).....	117	120
Dallins Mfg. Co. (Ala.).....	90	102
Darlington Mfg. Co. (S. C.).....	96	100
Engle & Phelps Mills (Ga.).....	100	100
Enoree Mfg. Co. (S. C.).....	113	118
Enterprise Mfg. Co. (Ga.).....	100	103
F. W. Poe Mfg. Co. (S. C.).....	112½	115½
Gaffney Mfg. Co. (S. C.).....	112	116
Granby Cotton Mills (S. C.).....	100	100
Graniteville Mfg. Co. (S. C.) 1st Pfd.	101	104
Greenwood Cotton Mills (S. C.).....	160	164
Grendel Mills (S. C.).....	100	104
Henderson Cotton Mills (N. C.).....	120	123
Henrietta Mills (N. C.).....	195	201
John P. King Mfg. Co. (Ga.).....	100	102
Langley Mfg. Co. (S. C.).....	143	112½
Laurens Cotton Mills (S. C.).....	135	143
Lockhart Mills (S. C.).....	102½	106
Loray Mills (N. C.).....	87	92
Louise Mills (N. C.).....	101½	101½

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Odele Mfg. Co. (N. C.).....	80	80
Orr Cotton Mills (S. C.).....	100	103½
Pacolet Mfg. Co. (S. C.).....	200	200
Pelzer Mfg. Co. (S. C.).....	172	180
Piedmont Mfg. Co. (S. C.).....	175	180
Raleigh Cotton Mills (N. C.).....	115	115
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Ridgeland Cotton Mills (S. C.) Pfd. 100	100	103
Roanoke Mills (N. C.).....	80	80
Sibley Mfg. Co. (Ga.).....	78	81
Southern Cotton Mills (N. C.).....	97	100½
Spartan Mills (S. C.).....	136	136
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Union Cotton Mills (S. C.) Pfd. 100	100	103
Victor Mfg. Co. (S. C.).....	102	102
Warren Mfg. Co. (S. C.).....	90	90
Warren Mfg. Co. (S. C.) Pfd. 104	104	104
Whitney Mfg. Co. (S. C.).....	120	120
Wilmington Cot. Mills (N. C.) Pfd. 100	100	105
Wissacasett Mills (N. C.).....	115	115
The Choctaw, Oklahoma & Gulf Railroad Co. has completed twenty-five miles of its extension between Weatherford, Okla., and Amarillo, Texas, and will open it for regular train service in the near future.		

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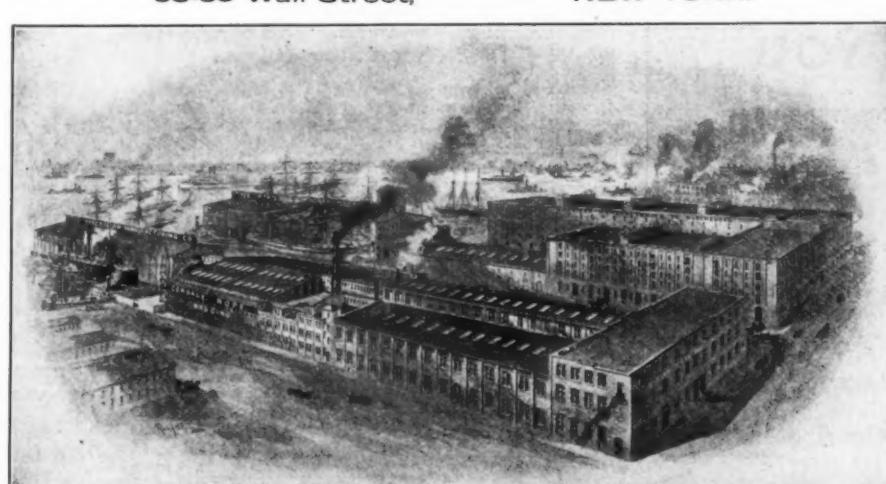
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We are now sending out representatives (free of charge in New York City and at the cost of travelling expenses only outside of the City) for the purpose of inspecting in confidence the books of firms and corporations to be closed as of June 29. These inspections enable us to quote prices for annual or semi-annual audits of books and accounts.

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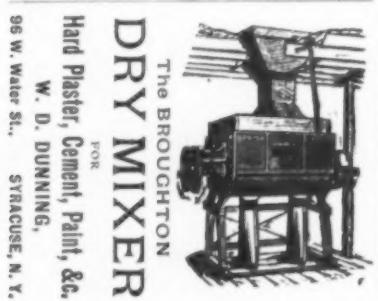
SALE OF MUNICIPAL BONDS.

SALISBURY, N. C., July 5, 1901. The City of Salisbury has authorized the issue of Coupon Bonds to the amount of ten thousand dollars (\$10,000) of the denomination of one thousand dollars (\$1000) each. These bonds are made payable 15 years after date, bear date July 1st, 1901, and draw interest at the rate of 5 per cent. per annum, the interest payable annually at the National Park Bank of New York City. Sealed proposals for the purchase of these bonds will be received for thirty days from this date. The city reserves the right to reject any and all bids. The bids should be addressed to the undersigned.

A. H. BOYDEN,
Mayor of the City of Salisbury, N. C.

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PROPOSALS.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., July 20th, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 29th day of August, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Custom House and Post Office at Brunswick, Ga., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Postmaster at Brunswick, Ga., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

BIDS for Building Bridge—Georgia, Laurens County.—Sealed bids will be received by the County Commissioners in the City of Dublin, until July 30, 1901, at 2 o'clock P. M., for furnishing material and constructing a steel bridge across the Oconee River Swamp at Dublin, Ga., to be 100 feet long and in accordance with the plans and specifications now on file in the County Commissioners' Office for inspection. Right to reject any and all bids. A. J. Weaver, Wm. Kea, J. M. Blackshear, J. E. Stanley, Albert R. Arnau, County Commissioners.

SEALED PROPOSALS will be received by the Mayor and Board of Aldermen of Roanoke, Ala., up to 7 P. M., August 1st, 1901, for furnishing all materials and labor for and constructing a combined Water Works and Electric Lighting System for the Town of Roanoke, Randolph Co., State of Alabama.

Drawings and specifications can be seen at the City Clerk's office, Roanoke, Ala., on and after July 27th, 1901, or at the office of the Consulting Engineer, Thomas V. Hall, West Point, Miss. Bids amounting to \$3000 and over require 10 per cent. certified check; under \$3000, check for \$200 required. Appropriation, \$35,000.

THOMAS V. HALL.

Notice to Contractors.

Mayor's Office,

Vicksburg, Miss., May 29, 1901.

Sealed proposals will be received at the office of the city clerk at Vicksburg, Miss., until 12 o'clock noon of Monday, May 29th, 1901, for the erection of a three-story city hall building at Vicksburg, Miss. The drawings and specifications can be seen at the offices of J. Riley Gordon, architect, at Dallas, Tex.; Shreveport, La.; the office of F. S. Hall, Suite 918, 153 La Salle Street, Chicago, Ill., and J. W. Thompson, Wainwright Building, St. Louis; also city clerk's office, Vicksburg, Miss. Payment in cash. Rights reserved to reject any and all bids.

W. L. TROWBRIDGE, Mayor.

ALBANY, GA., June 22, 1901. SEALED PROPOSALS will be received by S. B. BROWN, Mayor of Albany, until 12 o'clock noon, August 10th, 1901, for \$25,000 4% 30-year non-contestable gold coupon bonds, interest payable semi-annually in New York City. Certified check 2%. Right to reject any bid.

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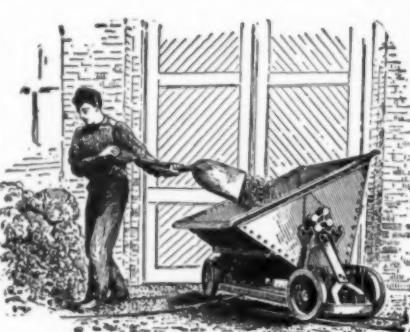
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Seaboard Air Line and river navigable 40 miles for light draft boats into a timber country untouched by railroads. Over 200 horse power available.

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No sites for Cotton and Woolen Mills are more attractive or valuable than those to be found on the

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The water powers are superb; coal for fuel convenient and low in price; the cotton fields almost within sight and sound of the water powers, with low rates on cotton from the various cotton markets to the mill sites (ask for tariffs) and the labor abundant, efficient and cheap. No more healthful region exists in the United States than that penetrated by the system of the Nashville, Chattanooga & St. Louis Railway. The water powers occur on numerous streams on the Huntsville & Sparta Division and on the Western & Atlantic Railroad, and range in dynamic force from 500 to 12,000 horse powers.

The prices of steam coal at the mills vary from \$1.00 to \$1.75 per ton. Labor is 25 per cent. cheaper than in the rigorous climate of the North, and finished goods may be transported to all markets, domestic and foreign, at rates as favorable as those accorded to other manufacturing districts in the United States. For descriptive pamphlets, maps, rates, etc., call on or address

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FOR SALE.

11,700 H. P. net, delivered electrically, Camden, S. C., where all trunk lines in South. \$20.00 per H. P. will buy and develop. H. P. rental for will pay 6 per cent. on total investment.

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Managers of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the Manufacturers' Record. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

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WEST PASCAGOULA, MISS.

Situated on Pascagoula Bay and on the line of the Louisville & Nashville Railroad.

These works have been in operation for more than twenty years, were recently entirely rebuilt and enlarged, and are now prepared to execute all orders for Creosoted Piles and Timber thoroughly impregnated with dead oil of coal tar.

New cylinders 115 feet long. Capacity one million feet per month. Address

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Superintendent, West Pascagoula Creosote Works,
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WANTED.

A middle aged A1 business man as Manager of a Large Fertilizing Plant about to be erected in the South. Must have had experience in the manufacture of fertilizer and fully understand the manufacturing of fertilizer, and have the cash to invest \$1000 in the common stock of the company, and be able to give a guarantee indemnity bond in the sum of \$20,000, which the company will pay for. Salary for the first year \$5000. Give age and references. Enclose stamp for reply.

Address STANDARD,
Commercial Club Building, 21st St., BIRMINGHAM, ALA.

FOR SALE.

For Sale—A Large Manufacturing Plant,

consisting of foundry, machine shop, carpenter, saw and tinsmith shops, large warehouse, railroad siding, two dwelling houses, stable and other buildings, located on the Philadelphia & Reading Railway, 11 miles east from Reading, 25 miles west from Allentown. Working departments equipped with numerous patterns, tools and machines for manufacturing agricultural implements, wagons, stationary engines, etc. For further information, terms, etc., address H. F. L. RUMMEL, Reading, Pa.

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Four store rooms and living apartments up stairs, also vacant lot adjoining 90x75. Price \$16,000. Terms: 1/2 cash, balance in one and two years.

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A Complete Hosiery Mill.

including dye-house, finishing room and small spinning plant. Situated at central point on Southern Railway. Mill now in full operation with orders ahead. Present owner wishes to retire on account of poor health. Address

W. H., care Manufacturers' Record.

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Expert advice on equipping and starting a mill on Union and Linen Towels will be given by a manufacturer who has been producing Union Towels in this country for the past four years. Correspondence solicited. Address

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The subscriber desires to establish the above plant at some favorable point in the South where the citizens will assist in the organization of the company and subscribe to the bonds or stock for erecting suitable mill buildings, etc.

Full correspondence invited.

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If you have the SOUTHERN FARM MAGAZINE will find new customers for you. The Magazine has in the last four years, as an authoritative periodical of information about agricultural capabilities and conditions in the South, built up an extensive circulation in the Northern, Western and Northwestern States among farmers who want to move South. As a result of its work there has been a constant and rapid increase in the volume of agricultural immigration to the South. With the recent enlargement of its work it becomes invaluable to all intelligent and progressive farmers of the South as a high class exponent of Southern agriculture.

Its circulation is being vigorously pushed in all the fourteen Southern States. It is now, therefore, valuable as a means of reaching farmer's not only throughout the North but also and especially in all parts of the South.

It will help you to sell Farm and Garden Implements and Machinery, Breeding Stock (Cattle, Horses, Sheep, Swine, Poultry), Stock Remedies, Farm and Stock Appliances and Specialties of every sort, Dairy Supplies, Seeds and Nursery Stock, Fertilizers, Household Articles and everything needed by the farmer or his family.

An advertisement in the Southern Farm Magazine will open up new channels of trade for you. TRY IT!

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WOULD YOU DO BETTER ?

Then let us tell you about one of the most attractive and growing towns
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Situated in the healthy Piedmont Region, offers unexcelled opportunities for profitable business openings of all sorts, viz. STORES, COTTON AND KNITTING MILLS, STOVE WORKS, MACHINE SHOPS, BASKET FACTORIES, AGRICULTURAL IMPLEMENT WORKS, ETC., ETC.

CEDARTOWN has Water Works, Electric Light Plant and Underground Sewerage, Churches of All Denominations and Good Public Schools. Write for further information regarding CEDARTOWN'S industrial development.

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Would
POWER
At a fuel cost of
\$5.00 Per Year

per ten-hour horse-power, be any attraction to you?

Wheeling, West Va.

can do even better than that. For particulars, ask the

Wheeling Board of Trade,

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Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

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WANTED.—A Superintendent for our Rock Salt Mines at Weeks Island, La. Must be familiar with rock salt business and capable of designing a rock salt mill. Write, giving reference and state experience. MVLES SALT CO., Ltd., New Orleans, La.

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Manufacturers of a complete line of mill machinery. Estimates cheerfully given. An up-to-date roll grinding and corrugating plant in operation.

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Wave
Fan.**
Patent applied for

This is an up-to-date fan for up-to-date people. It weighs 5½ ounces, and is made of highest grade steel and brass. Handsomely nickel plated and is packed one in a cardboard box suitable for mailing. The blades are adjustable, and the whole fan can be carried in the pocket without inconvenience. It is operated by opening and closing the hand in the same manner as one would use an ordinary curling iron.

The blades revolve at the speed of 4,000 revolutions per minute and will throw a strong current of air as far as an electric fan of the same size.

PRICE BY MAIL, \$1.50.

The Frantz-Gage Mfg. Co.

55 Fifth Avenue,
Manufacturers of
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For Rapid Transmission of
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 1 14 in. x 6 ft. Blaisdell Engine Lathe.
 1 16 in. x 8 ft. Blaisdell Engine Lathe.
 1 24 in. Gisholt Turret Lathe.
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 3-Ideal Automatic engines.
 3-Compound duplex pump, size 12 and 18 1/2 x 10 1/2.
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 1-Duplex pump, 14 x 8 1/2 x 10.
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 Corliss engines, generators, heaters, wood and iron working tools.

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72 inch Boring and Turning Mill.
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1 15x9 Farrel crusher.
 1 No. 2 multiple Jaw Blake crusher.
 1 No. 4 multiple Jaw Blake crusher.
 1 No. 5 multiple Jaw Blake crusher.
 1 20" Sturtevant mill.
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 1 set Krom rolls.

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 No. B-97-16" x 8", 25' 3" tubes. No. B-106-50" x 14", 41 4" tubes. No. B-056-30" x 8", 20 3" tubes.
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 No. B-112-60" x 12", 46 3 1/2" & 2 1/2" tubes. No. B-116-60" x 6", 28 4 1/2" tubes (5). No. B-125-77" x 5 1/2", 61 4" tubes. No. B-102-60" x 12", 70 3 1/2" tubes. No. B-109-44" x 10", 38 3" tubes. No. B-113-60" x 15", 52 3" tubes. No. B-114-60" x 16", 54 4" tubes. No. B-108-48" x 12", 54 3" tubes. No. B-98-40" x 10", 37 3" tubes. No. B-96-54" x 12", 71 3" tubes. No. B-95-40" x 10", 34 3" tubes.

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 No. B-151-30" x 6", 55 2" x 5" tubes, submerged. No. B-152-30" x 8", 50 2" x 5" tubes. No. B-160-30" x 6", 37 2" x 4" 6" tubes.
 (New.)
 No. B-144-24" x 6", 24 2" x 4" tubes.

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 No. B-131-15 H. P., 24" x 6" tubes. No. B-133-18 H. P., 28" x 5" tubes. All second-hand, in good working order.

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 No. B-28-11" x 10", No. B-39-7 1/2" x 14". No. B-37-12" x 20", No. B-40-12" x 15". No. B-44-14" x 20".
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 No. B-16-6" x 10", No. B-7-6" x 12". No. B-11-8" x 12", No. B-21-12" x 24". No. B-39-14" x 24".
 No. B-41-7" x 10". (New.)

No. B-4-6" x 8", No. B-9-7 1/2" x 7 1/2", No. B-13-8" x 12", No. B-14-5" x 10". No. B-23-11" x 14".
 (2). No. B-36-9" x 12", No. B-15-10" x 14". No. B-31-10" x 12". No. B-18-10" x 15" (2). No. B-10-8" x 10".

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No. B-50-3 1/2" x 3 1/2", No. B-54-4 1/2" x 5 1/2", No. B-55-6" x 6", No. B-56-5" x 5", No. B-65-7" x 7", No. B-49-10" x 10". Second-hand engines in good order, and all equipped with usual fixtures.

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 AIR COMPRESSORS.
 (Second-hand.)
 No. B-501-5" x 5", No. B-504-9 1/2" x 9 1/2" x 10".
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 No. B-508-water air compressors (3). No. B-509-water air compressors (C').
 No. B-510-2 1/2" x 6 1/2" x 6". No. B-500-8 1/2" x 16" x 12".
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Second-Hand Machinery.

3 13x5 Blaisdell lathes, elevating rest.
 1 13x6 Blaisdell lathes, elevating rest.
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 1 14x6 Ames lathes, elevating rest.
 10 15x6 Blaisdell lathes, elevating rest.
 2 15x6 Prentiss lathes, compound rest.
 1 20x8 Putnam lathe, compound rest.
 1 22x9 New Haven lathe, compound rest.
 1 22x22x5 Fitchburg planer.
 1 30x30x10 Putnam planer.
 1 36x36x10 Wilson planer, two heads.
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 1 26" Lodge & Davis shaper.
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 1 36" Snyder back-gear power-feed drill, G'd revolving table.
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 1 No. 12 Brown & Sharpe miller.
 4 No. 3/2 Garvin plain back-gear miller.
 1 No. 15 Garvin plain back-gear miller.
 1 1/2 Cleve. auto. screw machine.
 2 Cleve. auto. screw machines.
 2 Cleve. auto. screw machines.
 1 5" Niles boring mill, one head.
 Also large lot of other tools. Send for list.

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One second-hand "BERRYMAN" HEATER AND PURIFIER, in perfect condition and guaranteed good as new. Will sell cheap for cash. Address

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250 H. P. high-duty Atlas, rope driven.
1 pair Williams engines, 250 H. P. each.
1 22x60 Rankin-Fitch Corliss.
1 12x34 Putnam.
1 13x34 Fitchburg.
1 20x30 slide valve.
1 18x28 Nicols Burr.
1 22x36 Wright Corliss.
1 13x22x15 cross compound Armstrong & Sims.
1 15x17 Ideal.
1 15x16 Ball.
1 13x12 Ball.
1 12x12 Armstrong & Sims.
1 pair twin engines, 15x22.
1 20x40 automatic, with Nordburg governor.
1 McEwen compound.
1 Payne compound.
1 10x20 Rice automatic.
1 14x20 Atlas slide valve.
1 12x20 Atlas slide valve.
1 11x16 Atlas slide valve.
1 12x24 automatic.
1 12x24 slide valve.
10 Tiff engines, 9x12.
10 Tiff engines, 8x12 (reversible).
1 10x18 Buckeye.
1 11x16 Russell automatic.
1 8x14 Taylor-Beck.
6 10x22 plain slide valve.
1 9x14 slide valve.
1 10x18 vertical.
1 9x9 vertical Racine.
1 9x15x9 Westinghouse.
1 13x22x13 Westinghouse.
1 14x24x14 Westinghouse.
2 12x20x12.
1 10x8x10.
1 6x6.
1 11x10 Standard.
1 10x9.
1 12x11.

GAS AND GASOLINE ENGINES.

Gas and gasoline engines from 1 to 50 H. P.

BOILERS.

20 60x18 tubular.
10 60x16 tubular.
12 54x16 tubular.
4 72x20 tubular.
4 72x18 tubular.
1 Hene safety boiler, 80 H. P.
1 Sterling water tube, 125 H. P.
1 200 H. P. internally fired boiler.
1 25 H. P. upright fire box boiler.
1 40 H. P. upright fire box boiler.
1 45 H. P. upright fire box boiler.
1 50 H. P. upright fire box boiler.
1 60 H. P. upright fire box boiler.
1 90 H. P. "Economic," Erie City.
1 450 H. P. Hazelton tripod boiler.
1 80 H. P. Hazelton tripod boiler.
Also fire box boilers of all sizes from 10 to 50 H. P.

DYNAMOS.

1 T-H direct 600-light.
1 T-H direct 500-light.
1 Westinghouse alternator, 1000-light, 1000-volt.
1 60 k.w. Slattery alternator.
Also have electric motors of all sizes from 1/4 to 20 H. P.

1 Standard Gauge Rogers American Type Locomotive.

Diameter of cylinder, 15 1/2 in.; stroke, 22 in.; number of drivers, 4; thickness of tires, 1 3/4 in.; fire box, 4 ft. 3 in. by 10 in. by 4 ft. 6 1/2 in.; weight, 30 tons; complete with tender; has been rebuilt from the ground up, and is in first-class condition.

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2 36x12 in. high.
2 30x14 in. high.
1 40x10 ft. long.
1 open tank, 24 in. by 5 ft. long.
1 galv. 24 in. by 7 ft. 8 in. long.
1 jacketed galv. 30x30 in. high.
3 22 in. by 3 ft. 6 in. high.
1 24 in. by 3 ft. 6 in. high.
1 galv. jacketed, inside diam., 23 in.; outside, 27 in.; inside depth, 24 in.; height over all, 28 in.
3 24 in. by 4 ft. 6 in.
1 50-gal. kettle.

Write for our Complete Catalogue No. 239.

We are constantly adding to our stock of machinery and supplies, and will be pleased to estimate on your requirements.

Chicago House Wrecking Co.

W. 35th and Iron Sts., CHICAGO.

STEAM ENGINES.

1 20" and 36" x 48" Tandem Hamilton Corliss, wheel 22" x 56" face.
1 34 in. x 60 in. **Geo. H. Corliss** rolling mill engine, right hand wheel, weighing 40 tons, 26 ft. diameter.
1 36x72 Wheelock.
1 29x72 Wheelock.
2 30x60 Harris Corliss right and left hand wheels, 58" face by 20 ft. diameter.
1 24" x 48" Bates Corliss.
1 20" x 48" Geo. H. Corliss.
1 10" x 24" Harris Corliss.
1 11" x 30" Brown.
1 16 1/2 in. x 25 in. x 15 in. cross compound Armstrong & Sims.
1 14 in. and 24 in. x 14 in. Westinghouse compound.
3 16 in. and 27 in. x 16 in. Westinghouse compound.
2 13" x 12" Erie Ball.
2 12" x 12" Ball automatic.
2 13 in. x 14 in. Watertown automatic.
1 14 in. x 13 in. Armstrong & Sims automatic.
1 15 1/2 in. x 16 in. New York safety automatic.
1 15 1/2 in. x 15 in. Armstrong & Sims automatic.
2 16 in. x 16 in. Ball automatic.
1 18 1/2 in. x 18 in. Ideal automatic.

BOILERS.

2 375 H. P. Sterling water tubes for 150 lbs.
2 200 H. P. National water tubes for 125 lbs.
2 175 H. P. Sterling water tubes.
3 66" x 16" Return Tubulars.
2 500 H. P. Hazelton boilers.

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1 600 H. P. Snow condenser.
3 325 H. P. Davidson condensers.

Railway Generators.

4 300 K. W. M. P. 4, General Electric.
3 100 K. W. M. P. 4, General Electric.
2 111 K. W. M. P. 4, Westinghouse.
4 60 K. W. Edison bi-polar.

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110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

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Electrical and Steam Machinery,

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BIG BARGAINS.

General Electric, **Inductor Motors**, three phase, sixty cycle.

1 15-H. P. 110 volt, speed 900, price \$350.00
1 30-H. P. 110 volt, speed 900, price \$550.00
1 75-H. P. 350 volt, speed 600, price \$1,100.00

Chicago delivery, ready to ship. Hundreds of other bargains in stock. **GUARANTEED ELECTRIC CO.**

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SPECIAL GAS ENGINE BARGAINS.

5 H. P. Foos, 38 H. P. White & Middleton, 15 H. P. New Era, 28 H. P. Fairbanks-Morse, 12 H. P. Otto, 12 H. P. Otto, 10 H. P. New Era, 12 H. P. Fairbanks-Morse, 15 H. P. Chicago, 12 H. P. Chicago, 27 H. P. Chicago, 23 H. P. Chicago, 2 H. P. Fairbanks-Morse, 2-25 H. P. Fairbanks-Morse. Engines, all sizes, bought, sold and exchanged. Address

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Wood-Working Machinery

all in good condition. Engines for Lighting Stations and Trolley Roads our specialty.

H. C. BAKER & CO.,

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Lot of Boilers, Engines, Lathes, Planers, Drill-Presses, 1 Large Fire Pump, Steam Pipe, all sizes, and about 500 Tanks of different sizes.

WILLIAM ECKBOLD'S SONS,
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Planing Mill Machinery.

We have three complete Planing Mill and Furniture Factory Outfits for sale. All machines in first-class order. Will be sold singly or collectively. Write for complete list.

Cleveland Belting & Machinery Co.

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FOR SALE.

IRON TUGBOAT IVANHOE,

length over all 66 feet, beam 15 feet, depth of hold 7 feet; engine 15 x 15 sq. in. carries 20 tons coal; tanks will carry her 20 hours; in good running order. Now at Philadelphia, Pa. Apply to

GEORGE W. EGAN, Charleston, S. C.

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One 8-horse power Upright Engine,

One 9-horse power Upright Boiler.

One 11-horse power Upright Boiler.

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We own about 3500 tons of

60-lb. STEEL RELAYING RAILS and Angle Splice Bars for same. Will sell in lots to suit buyer, and subject to Hunt & Co.'s inspection. Well located for Southern delivery.

We also handle new or second-hand light-weight Rails.

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FOR SALE.

We carry a large line of Engines, both new and second-hand, in stock-cross-compound Corliss, tandem-compound Corliss and simple Corliss from 150 H. P. down to 75 H. P.

Automatic Engines, every size and make—slide and piston-valve Engines from 1000 H. P. down to 5 H. P.

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BLowers, Exhaust fans, shafting, pulleys, hangers, valves, governors, belting and pipe.

PUMPS—All sizes and makes from 3,000,000 gallons down.

CONDENSERS—Deane, Nordberg, etc.

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1 600-light Edison incandescent dynamo.
2 400-light Edison incandescent dynamos.
1 60-light Thomson-Houston incandescent dynamo.

1 65-light Brush arc.

1 60-light Wood arc.

1 50-light Thomson-Houston incandescent dynamo.

1 30-light Brush dynamo.

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One 18" muck mill, one 18" sheet-bar mill, one squeezer, iron and wooden jib cranes, traveling cranes, rotary shears, hydraulic pumps, floor-plate, buggies, etc.

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4000, 1200, 700 and 400 pounds double-legged Morgan.

275 pounds single-legged Kline.

ICE AND REFRIGERATING PLANT. One pair of Pictet horizontal Ice Machines, consisting of two Corliss Engines, 16" x 36", and ammonia Compressor, 10" x 36" (ammonia end being new and manufactured by the Vilter Manufacturing Co., Milwaukee, Wis.); capacity of each machine 25 tons ice or 50 tons refrigerating.

The above is a very fine machine, thoroughly overhauled, and has just been sold to us by a Pittsburg firm, who replaced it with a machine of much larger capacity. Price \$4500 f. o. b. Pittsburg.

PUMPS—FOR WATER-WORKS.

One Worthington Duplex 25x20x25, rods 3 1/4" diameter, displaces 32,000 gallons per stroke, 110 strokes per minute. Total capacity over 5,000,000 gallons in twenty-four hours. Weight about 40,000 pounds.

This pump is as good as new and has been taken out of our city water-works, being replaced by one of much larger capacity.

WICKES BROS., 45th St. & A. V. Ry., Pittsburgh, Pa.

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1 Fairbanks Gasoline Engine (50 horse power). This engine is new and complete in every particular, including a 40-gallon galvanized tank, 1 box batteries, fixtures, piping, belting, and an extra 525-gallon galvanized gasoline tank. Will sell at a great bargain. 1 Steam Fire Engine, late from Baltimore department. 4 Hoisting Engines, 12, 15, 18 and 25-horse power respectively. A number of single and duplex Steam Pumps. Cistern, Deck and Deep Well Pumps (new). General machine work and repairing. I make a specialty of repairing Steam Pumps, High-speed and Gasoline Engines.

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New and Second-Hand Boilers, Engines, Mining Outfits and General Machinery.

One Complete Stem Fertilizer Plant, including

1 Exhaust Fan, fittings and piping; 90' Chain Belt and Sprocket Wheels; Drier and fittings; Conveyor and belting; 2" Conveyor and fittings; Elevator Sprocket Wheels and Chain Belting; Scientific Attrition Mill, No. 14; Exhaust Fan; 4" Piping; Dust Collector and connections; Reel and fittings; Transmitting Rope Sheave; 1 large Breaker; 1 Combination Breaker; 1 Magnetic Separators; 1 Self Feed Ross Cutter, No. 116; Conveyor and Elevator; 1 30" New American Turbine Wheel, all bearing parts new.

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SECOND-HAND MACHINERY.

2 120-h. p. 66 1/2" x 18" Tubular Boilers.
1 60-h. p. 60 1/2" x 18" " "
1 60-h. p. 54 1/2" x 14" "
1 100-h. p. 13x12 Ball Automatic Engine.
2 18x12x10 Worthington Duplex Pumps.
2 34 Exhaust Fans.
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3 Marion, Model "G" second-hand, 2½-yd. bucket, friction feed
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1 Marion, Style "B" second-hand, 1½-yd. bucket, friction feed.
1 Cyrus, 55-ton, second-hand, 1½-yd. bucket, friction feed.
2 Cyrus, 45-ton, second-hand, 1½-yd. bucket, friction feed. 1 Osgood Shovel.

LOCOMOTIVES.

4 0x14, 36-inch gage saddle tank, 2 7x12, 36-inch gage saddle tank, 1 9x16, 36-inch gage Mogul, 2 11x16, 36-inch gage Mogul.
1 8x12, stand. gage saddle tank (Porter).
3 19x24, stand. gage, 6-whl. con'ted switchers.
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22 stand. gage, 8-wheel road engines.
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1 30 in. Buss Machine Co. surface furniture planer.
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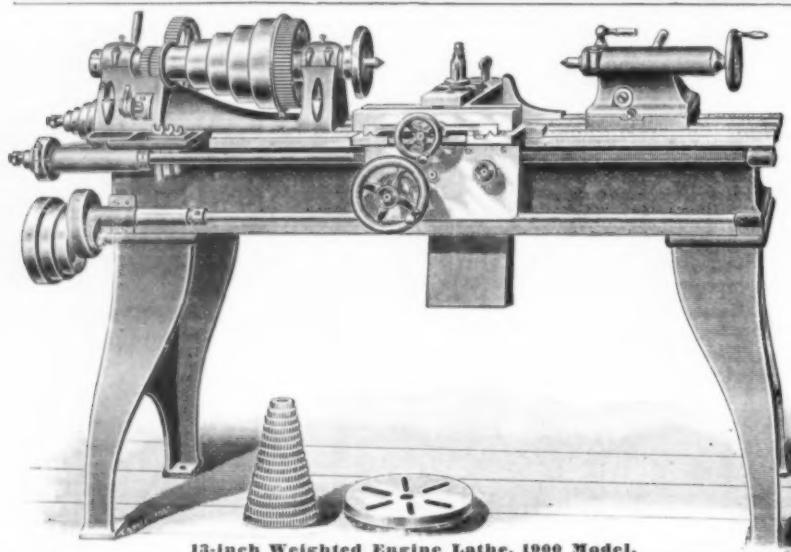
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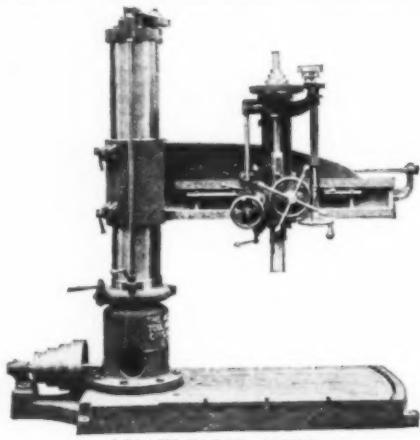
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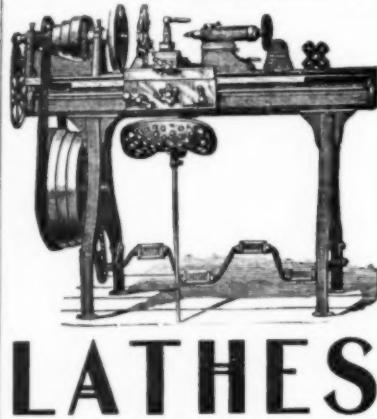
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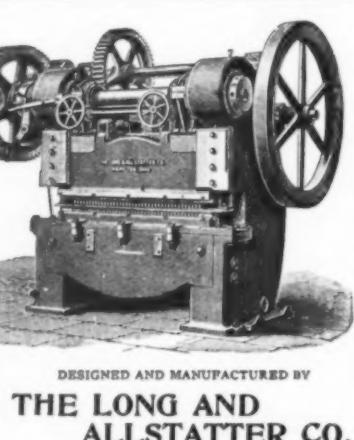
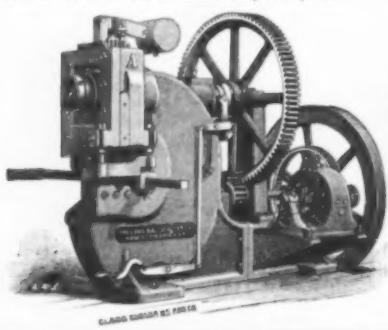
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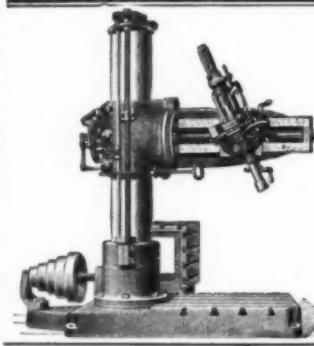


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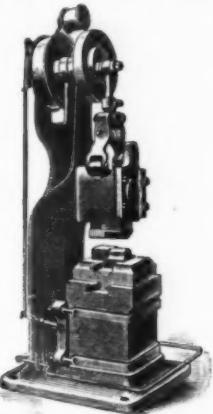
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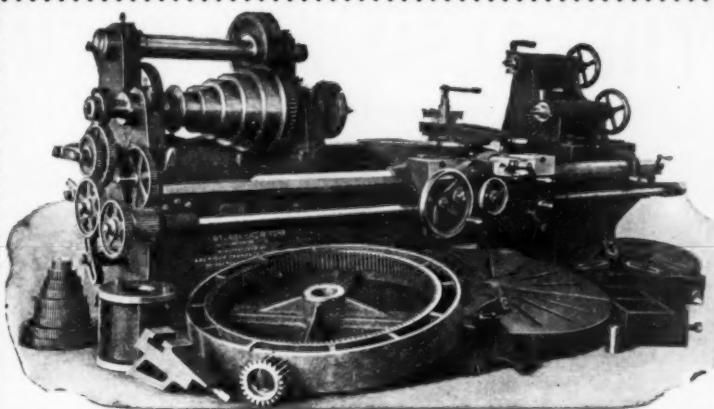
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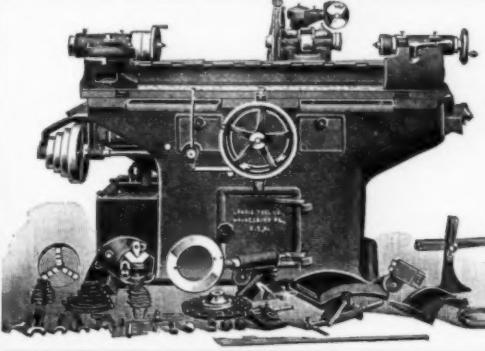
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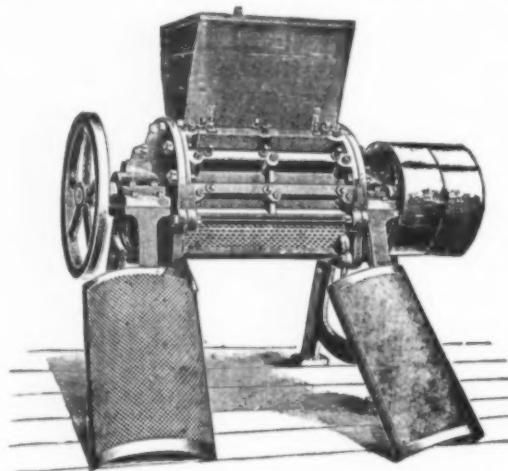
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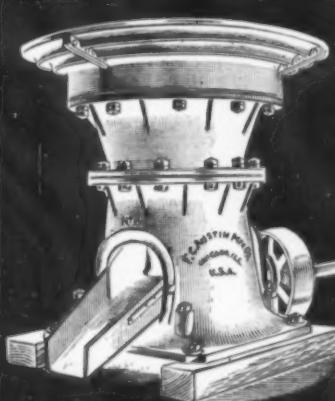
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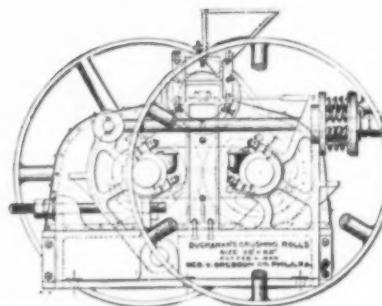
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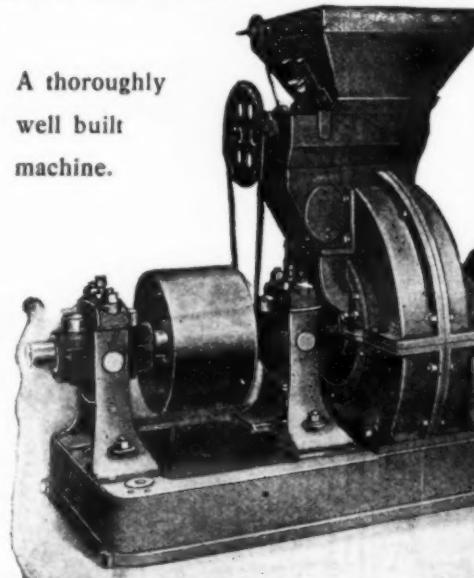
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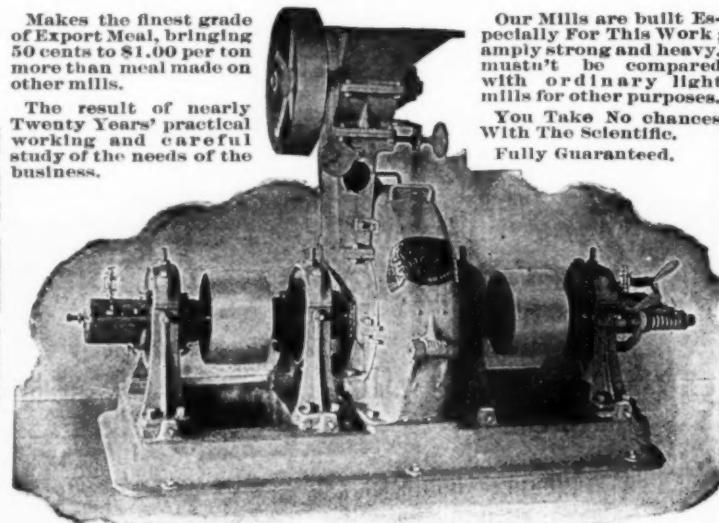
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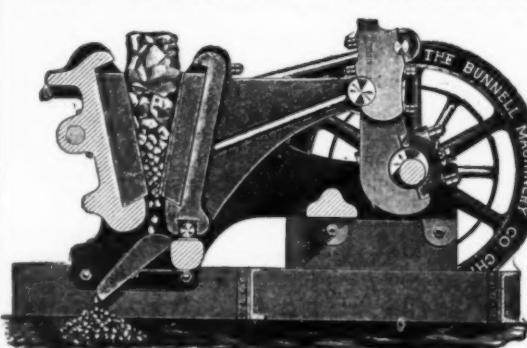
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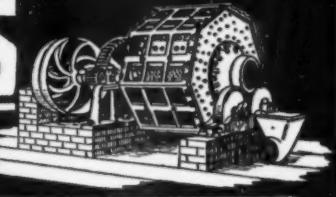
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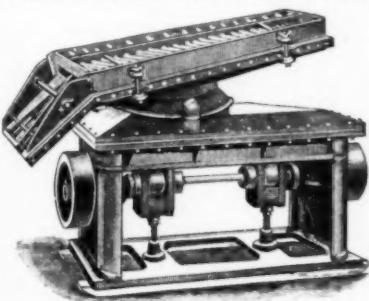
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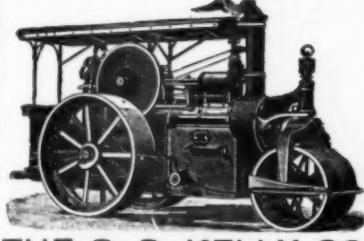
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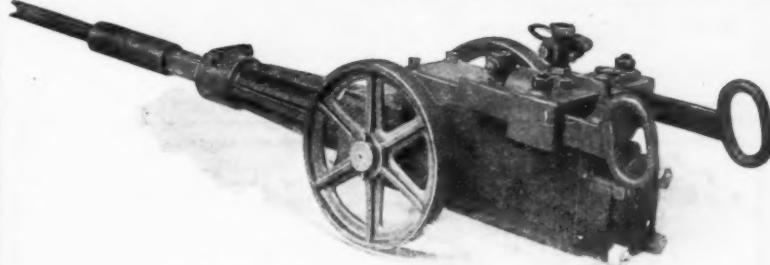
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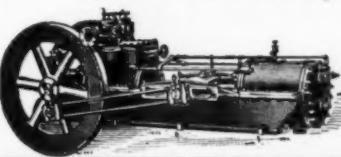
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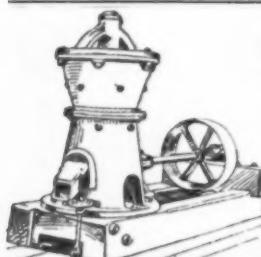
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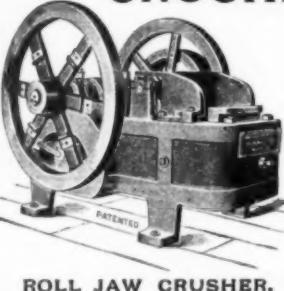
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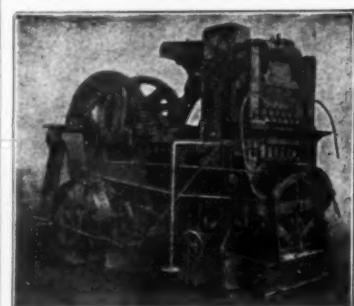
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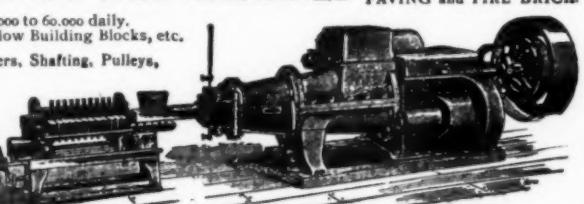
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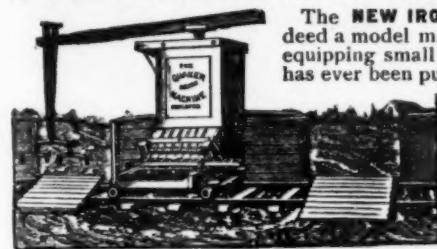
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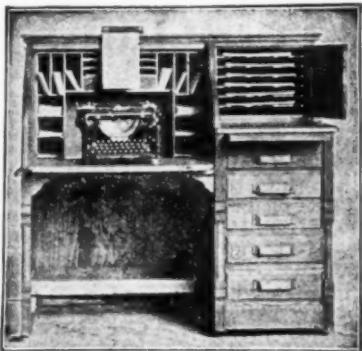
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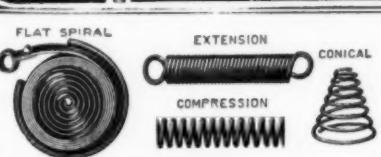
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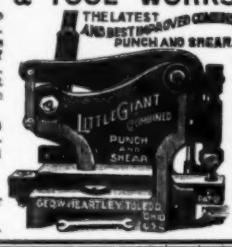
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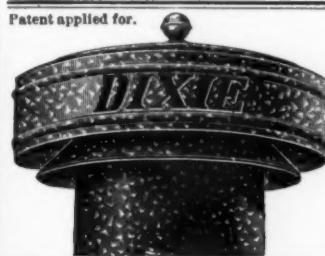
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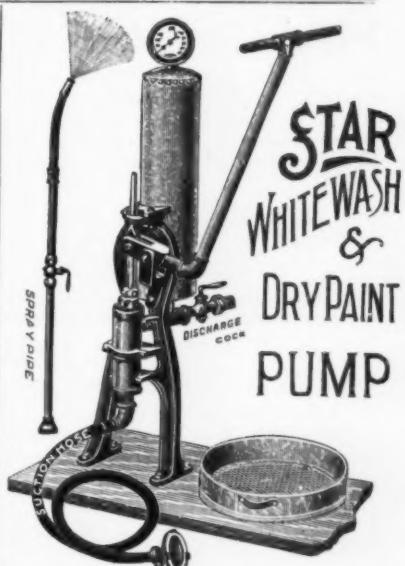
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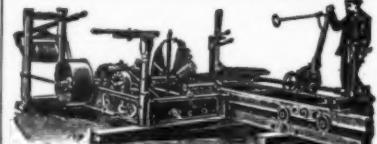


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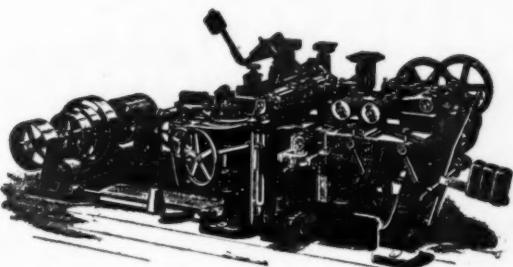
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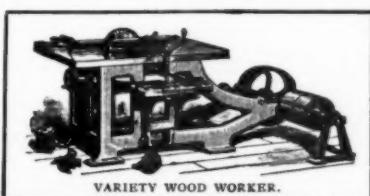
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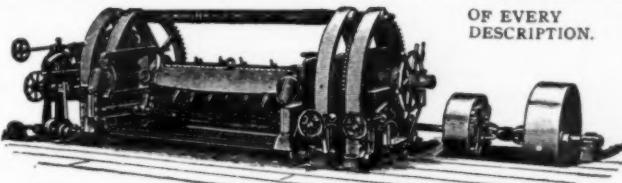
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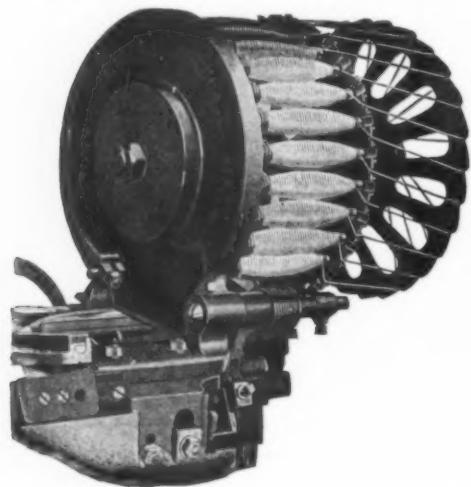
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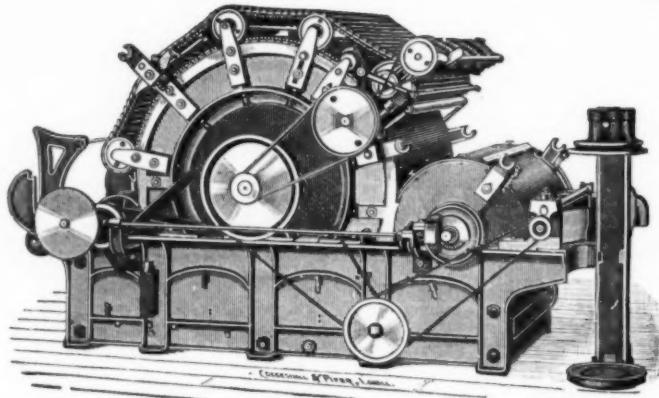
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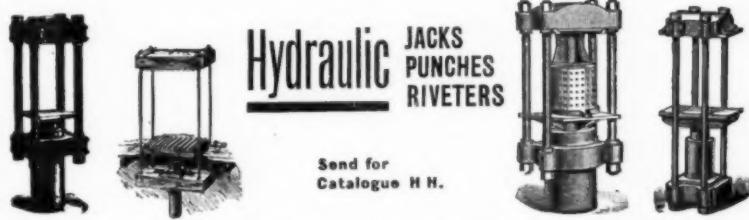
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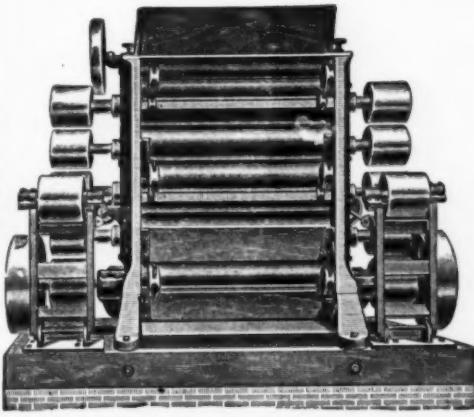
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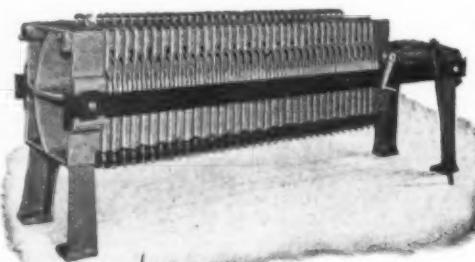
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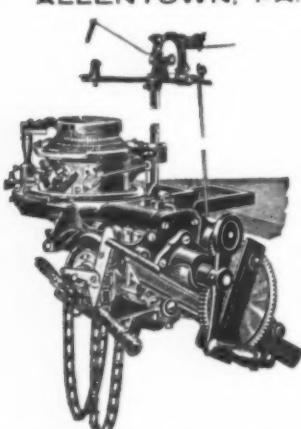
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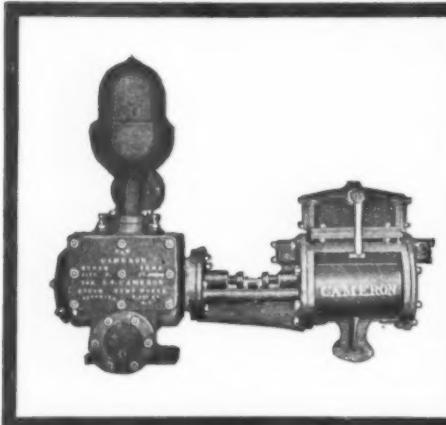
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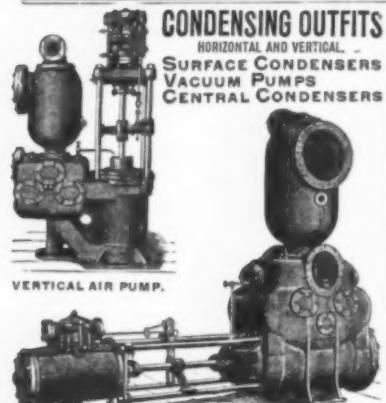
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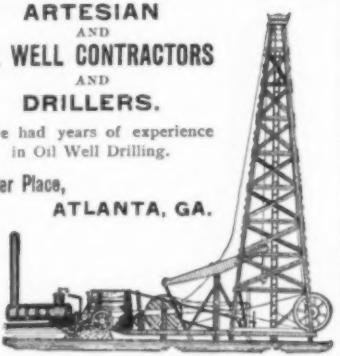
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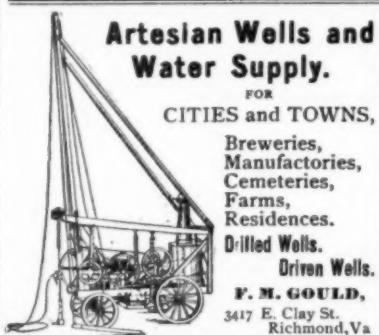
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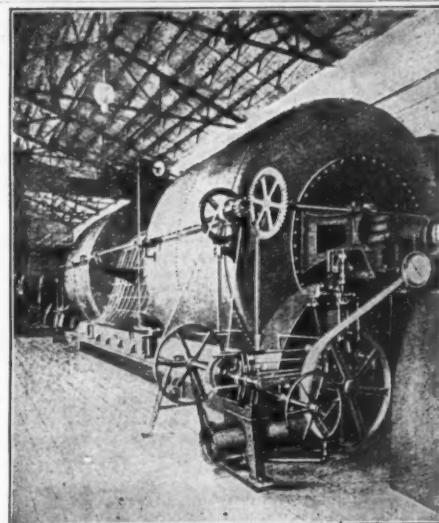
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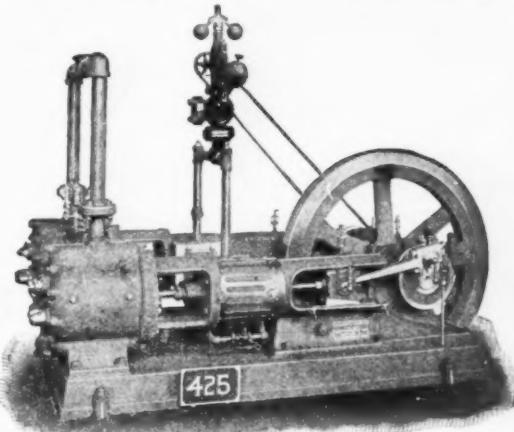
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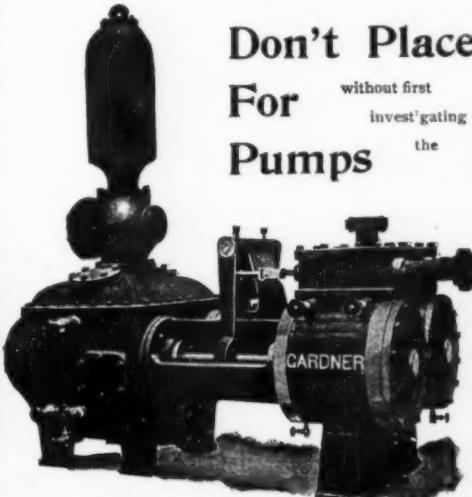
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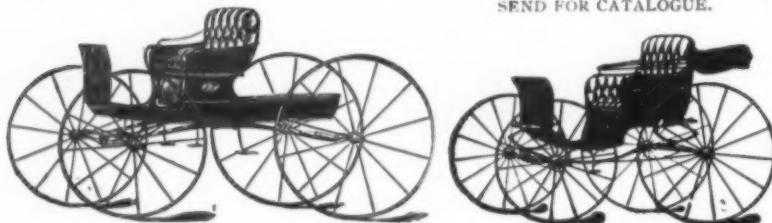
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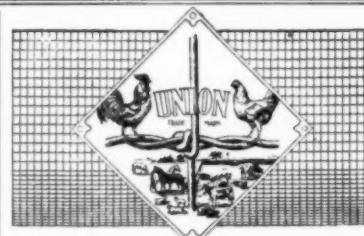
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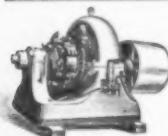
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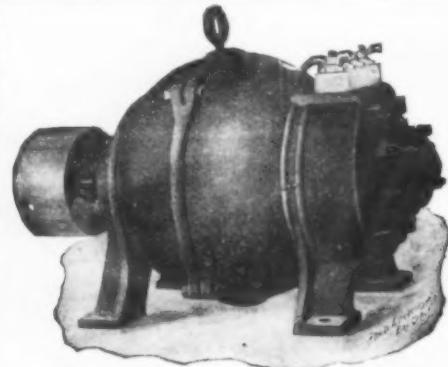
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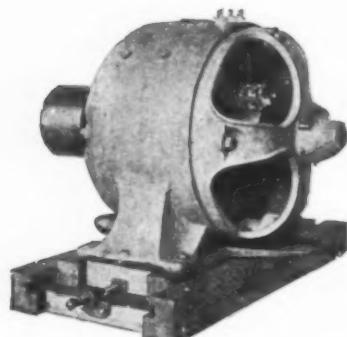
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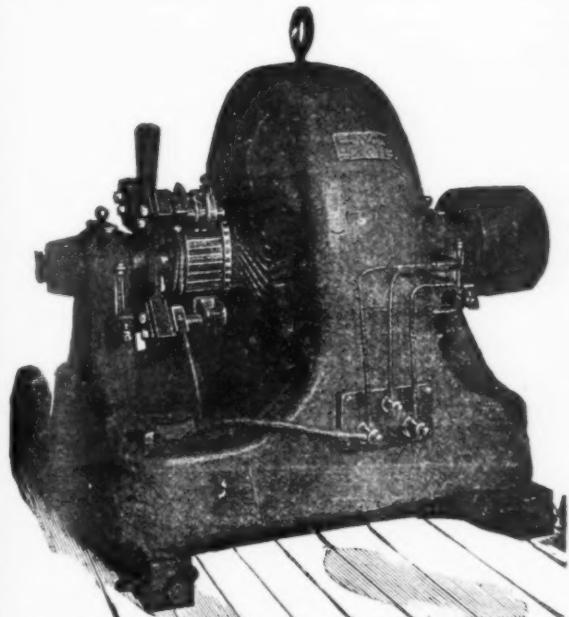
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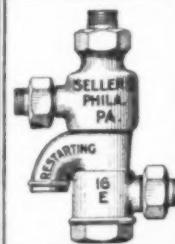
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